Office-Supreme Court, U.S.
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ALEXANDER L. STEVAS,
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No. 84-1259

IN THE

Supreme Court of the United States

October Term, 1984

THE DOW CHEMICAL COMPANY,
Petitioner,

versus

UNITED STATES OF AMERICA,
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

JOINT APPENDIX

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PETITION FOR CERTIORARI FILED FEBRUARY 7, 1985
CERTIORARI GRANTED JUNE 10, 1985

BEST AVAILABLE COPY

TABLE OF CONTENTS OF JOINT APPENDIX

PAGE

Relevant Docket Entries: United States District Court for the Eastern District of Michigan, Docket No. 78-10044 . . . . . A-1

Relevant Docket Entries: United States Court of Appeals for the Sixth Circuit, Docket No. 82-1811 A-11

Memo Dated 12/20/60 Regarding Dow Aerial Photo Policy, Attached to Dow's Supplemental Answers to Interrogatories Filed 9/25/80, and an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 80 and 131 . . . . . A-13

Letter Dated 11/27/73 Regarding Aerial Security, Attached as an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 131 . . . . . A-13

Letter Dated 3/25/74 Regarding *Dupont* v. *Christopher*, Attached as an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 131 A-15

Letter Dated 10/13/76 Regarding Dow Plant Security, Attached to Dow's Answers to Interrogatories Filed 5/2/80 – Dist. Ct. Dkt. 56 . . . . . A-16

Letter Dated 10/22/76 Regarding Dow Plant/Photo Security, Attached to Dow's Supplemental Answers to Interrogatories Filed 9/25/80, and an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 80 and 131 . . . . . A-19

Letter Dated 7/7/77 Regarding Dow Plant Security, Attached to Dow's Answers to Interrogatories Filed 5/2/80, and an Exhibit to Michael Kelyman (Dow) Deposition of 3/35/81 – Dist. Ct. Dkt. 56 and 131 . . . . . A-20

Letter Dated 4/18/78 Regarding Suspicious Aircraft Over the Plant, Attached as an Exhibit to Michael Kelyman (Dow) Deposition of 3/25/81 – Dist. Ct. Dkt. 131 . . . . . A-21

PAGE

Deposition Excerpt of Jack Brown (Dow) – 5/9/78 (pp. 9-13) – Dist. Ct. Dkt. 18 . . . . . A-22

Deposition Excerpt of William E. Beyer (EPA) – 1/9/79 (pp. 19, 23-25, 34-35) – Dist. Ct. Dkt. 30 . . . . . A-25

Deposition Excerpt of Michael Smith (EPA) – 11/2/78 (pp. 23-24, 34, 41-43, 70, 87-88) – Dist. Ct. Dkt. 29 A-28

EPA Letter of 2/3/78 Requesting Aerial Photography of Dow, Attached as Exhibit 1 to James O. McDonald (EPA) Deposition of 11/2/78 – Dist. Ct. Dkt. 27 . . . . . A-32

EPA's Answers to Interrogatories Filed 6/29/78 (#s 2, 4, 6, 7, 8, 20, 39, 47) – Dist. Ct. Dkt. 22 . . . . . A-33

Affidavit of Clayton E. Lake (EPA) Dated 6/10/81, in Support of U.S.'s Response to Dow's Opposition to U.S.'s Motion For Summary Judgment Filed 10/31/81 – Dist. Ct. Dkt. 187 . . . . . A-36

Deposition Excerpt of Clayton E. Lake (EPA) – 2/7/79 (pp. 29-32, 66-67, Exhs. 2D, 2E, 2G) – Dist. Ct. Dkt. 41 . . . . . A-39

Affidavit of Thomas M. Schafer (Abrams Aerial, Inc.), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 3 . . . . . A-45

Deposition Excerpt of Clayton E. Lake (EPA) – 7/14/81 (pp. 49-50, 80-82, 84-86) – Dist. Ct. Dkt. 253 . . . A-47

Affidavit of William E. Beyer (EPA) Dated 6/15/81, in Support of U.S.'s Response to Dow's Opposition to U.S.'s Motion For Summary Judgment Filed 10/13/81 – Dist. Ct. Dkt. 187 . . . . . A-51

PAGE

Affidavit of Stephen H. Rothblatt (EPA) Dated 6/15/81, in Support of U.S.'s Response to Dow's Opposition to U.S.'s Motion For Summary Judgment Filed 10/13/81 – Dist. Ct. Dkt. 187 . . . . . A-52

Photographs – Exhibits 2 and 3 (under Seal) and Exhibit 7 in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment – Dist. Ct. Dkt. 168 and 170 . . . . . *see Sealed Joint Appendix*

Photographs – Exhibits 4 and 5 (under Seal) Excerpts* in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment – Dist. Ct. Dkt. 168 and 171 . . . . . *see Sealed Joint Appendix*

Affidavit of H. V. (Jack) Wait, Jr. (Dow) Dated 7/30/81 in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment Filed 8/17/81 – Dist. Ct. Dkt. 168 . . . . . A-53

Affidavit of Sherman Hollander (Mich. DNR) Dated 8/4/81, in Support of Dow's Reply to U.S.'s Opposition to Dow's Motion For Summary Judgment Filed 8/17/81 – Dist. Ct. Dkt. 168 . . . . . A-54

Affidavit of Michael Kelyman (Dow), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 2 A-55

Affidavit of Leroy L. Mastic, Jr. (Dow), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 4 A-57

Affidavit of Robert R. Bumb (Dow), Attached to Complaint Filed March 15, 1978 – Dist. Ct. Dkt. 5 A-63

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* The original exhibits are available to the Court as part of the record. Due to the size of the original exhibits, it is impossible to include them in the Joint Appendix. The excerpts are "cropped" portions of the original exhibits.

PAGE

Deposition Excerpt of Leroy L. Mastic, Jr. (Dow) – 5/9/78 (pp. 11-16) – Dist. Ct. Dkt. 17 . . . . . A-69

Deposition Excerpt of H. V. (Jack) Wait, Jr. (Dow) – 5/10/78 (pp. 11-14, 20) – Dist. Ct. Dkt. 19 . . . . . A-72

Deposition Excerpt of Leroy L. Mastic, Jr. (Dow) – 3/24/81 (pp. 51-53, 88-89) – Dist. Ct. Dkt. 130 . . . . A-76

Deposition Excerpt of Michael Kelyman (Dow) – 3/25/81 (pp. 78-79, 121-123, 181) – Dist. Ct. Dkt. 131 . . . . . A-79

Deposition Excerpt of H. V. (Jack) Wait, Jr. (Dow) – 4/8/81 (pp. 40, 43-46, 50-51) – Dist. Ct. Dkt. 152 . . A-82

Letter Dated 6/21/79 from Union Carbide Corporation to EPA Regarding Aerial Surveillance per EPA's Supplemental Answers to Interrogatories Filed 4/17/81 – Dist. Ct. Dkt. 134 . . . . . A-86

Letter Dated 6/22/79 from FMC Corporation to EPA Regarding Aerial Surveillance per EPA's Supplemental Answers to Interrogatories Filed 4/17/81 – Dist. Ct. Dkt. 134 . . . . . A-89

Wire Dated 1/11/80 from EPA to Monsanto Regarding Aerial Photography, Attached to Dow's Motion to Compel Discovery Filed 3/26/81 – Dist. Ct. Dkt. 117 . . . . . A-91

Wire Dated 1/14/80 from Monsanto to EPA Regarding Aerial Photography, Attached to Dow's Motion to Compel Discovery Filed 3/26/81 – Dist. Ct. Dkt. 117 . . . . . A-92

Wire Dated 1/17/80 from EPA to Monsanto Regarding Aerial Photography, Attached to Dow's Motion to Compel Discovery Filed 3/26/81 – Dist Ct. Dkt. 117 . . . . . A-93

PAGE

Transcript Excerpt of 11/12/81 Oral Argument on Cross Motions for Summary Judgment (p. 44) – Dist. Ct. Dkt. 232 . . . . . A-94

Order Allowing Certiorari – Supreme Court of the United States, June 10, 1985 . . . . . A-94

Non-Fully Owned Subsidiaries And Affiliates of The Dow Chemical Company as of June 30, 1985 A-95

The following opinions and references have been omitted in printing this Joint Appendix because they appear in the Appendix to the Petition for Certiorari.

PETITION APPENDIX

Opinion of the U.S. District Court of Appeals for the Sixth Circuit, Filed November 9, 1984 . . . . . A

Opinion of the U.S. District Court for the Eastern District of Michigan, Filed April 19, 1982 . . . . . B

Excerpts from Restatement of Torts § 757 (1939) C

Uniform Trade Secrets Act . . . . . D

Relevant Michigan Compiled Laws:
Mich. Comp. Laws § 750.539a and d . . . . E
Mich. Comp. Laws § 752.771 . . . . . E
Mich. Comp. Laws § 751.772 . . . . . E

No. 84-1259

IN THE

Supreme Court of the United States

October Term, 1984

THE DOW CHEMICAL COMPANY,
Petitioner,

versus

UNITED STATES OF AMERICA,
BY AND THROUGH ADMINISTRATOR,
ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

JOINT APPENDIX

RELEVANT DOCKET ENTRIES

(United States District Court —
Eastern District of Michigan — No. 78-10044)

DATE	*N.R.*	*PROCEEDINGS*
1978		
3/15	1.	Filed complaint w/attached exhibit. Summons issued.
3/15	2.	Affidavit of Michael (NMI) Kelyman.
3/15	3.	Affidavit of Thomas M. Schafer.

DATE	N.R.	PROCEEDINGS
3/15	4.	Affidavit of Leroy L. Mastic, Jr.
3/15	5.	Affidavit of Robert R. Bumb.
3/15	6.	Motion for preliminary injunction.
3/15	8.	Motion for temporary restraining order w/ certification of counsel.
3/17	11.	Temporary Restraining Order (3/16/78) (C. Joiner) IT IS ORDERED that defendant Douglas M. Costle, Administrator, Environmental Protection Agency, his agents, employees, contractors and any other parties acting in concert with them be and they hereby are temporarily restrained from in any way disseminating, releasing, copying, or duplicating the photographs which it had taken of Dow's plant in Midland, Michigan, or from disseminating or releasing any information obtained in any way from said photographs pending a hearing and determination of plaintiff's Motion for Preliminary Injunction, conditioned further that plaintiff, Dow, not be required to post any bond for the payment of such costs and damages as may be incurred or suffered by any party who is found to have been wrongfully enjoined or restrained, excepting that the photographs may be used by those EPA employees who are currently involved in the preparation of an enforcement action against Dow under the Clean Air Act, and by Thomas M. Woods and Ronald W. Mellish of the United States Attorney's office

DATE	N.R.	PROCEEDINGS

3/17 *cont.* in the preparation of said enforcement action. IT IS FURTHER ORDERED that the term of this order shall be until April 7, 1978, at 5 p.m. unless extended by further order of the Court.

4/7 15. STIP & ORDER FOR PRELIMINARY INJUNCTION J. Harvey

1. That the defendant Douglas M. Costle Administrator, Environmental Protection Agency, his agents, members, contractors and any other parties acting in concert with them be and they hereby are enjoined from in any way disseminating, releasing, copying or duplicating the photographs which it had taken of Dow's plant in Midland, Michigan, or from disseminating or releasing any information obtained in any way from said photographs while this order remains in effect.

2. That all the negatives, prints, enlargements and mosaics which are the subject matter of this action and any written abstracts therefrom, shall be sealed and placed in the custody of the Court and shall thus be maintained until further order of the Court.

3. Such photographs, negatives, prints, enlargements and mosaics shall be available to those Environmental Protection Agency employees who are currently involved in the preparation of an enforcement action against Dow under the Clean Air Act, and by Thomas M. Woods and

DATE	N.R.	PROCEEDINGS
4/7 *cont.*		Ronald Mellish of the United States Attorney's office and Charlotte Uram of the Justice Department in the preparation of said enforcement action; provided, however, that notice shall be given to counsel for the plaintiff prior to any such use and counsel for the plaintiff, or his designee, may be present at such inspection. 4. Nothing contained in this Preliminary Injunction shall in any way be construed as affecting or determining any of the rights of the parties or any of the issues involved in the case, nor shall any of the contents herein be construed as an admission by any party. 5. Either party may move for dissolution or modification of this Order and within five (5) days thereafter a hearing shall be held and at such hearing consideration of the continuance of this Preliminary Injunction or the issuance of any other Order shall be determined de novo.
5/22	17.	transcript of dep of Leroy L. Mastic, Jr.
..	18.	.. .. Jack Brown
..	19.	.. .. Jack Wait
6/29	22.	Def's Answers to Plf's First Interrogatories
8/14	23.	Def's Answer to Complaint w/proof
12/6	27.	transcript of James McDonald
12/15	29.	transcript of Michael Smith

DATE	N.R.	PROCEEDINGS
1979		
2/9	30.	transcript of Dep of Wm. Beyer
4/20	41.	Deposition of C Lake.
1980		
5/2	56.	Pltf's Objection and Answers to Deft's Interrogatories to Pltf and Request to Produce Documents.
5/2	57.	Pltf's Motion for Protective Order w/Memo in Support of.
6/9	59.	ORDER J. Harvey s/6-5-80 w/proof. IT IS HEREBY ORDERED that pltf be permitted to file its amended complaint. Further, since pltf has already filed a copy of its proposed amended complaint, Pltf need not refile another copy with the Court. The date of this Order Shall be deemed the date of filing of the amended complaint for purposes of deft's answer thereto. FR Civ P 15(a).
6/26	61.	Pltf's Amended Complaint.
7/22	67.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof. Pltf's Motion for protective order is hereby GRANTED. See Order for further information.
9/9	76.	Deft Douglas M. Costle ANSWER TO PLTF'S AMENDED COMPLAINT.
9/25	79.	Pltf's Notice of Motion for Discovery Conference w/Motion for Discovery Conf and Memorandum in Support of.

DATE	N.R.	PROCEEDINGS
9/25	80.	Pltf's Supplemental Answers to Deft's Interrogatories to Pltf and Request to Produce Documents w/exhibits.
11/3	92.	Pltf's Supplemental Memorandum In Support of Motion for Discovery Conference w/proof.
1981		
3/26	117.	Pltf's Motion for An Order Compelling Discovery w/brief and proof.
3/26	120.	Pltf's Notice of Motion for Partial Summary Judgment w/Motion for Partial Summary Judgment, Brief and proof.
4/7	124.	Deft's Opposition to Pltf's Motion for Partial Summary Judgment and Motion for Continuance, w/memorandum, affidavit and cert of service; w/Proposed Order
4/13	130.	Deposition of Leroy Mastic.
4/13	131.	Deposition of Michael Kelyman.
4/17	134.	Deft's Costel's Supplemental Answer to Pltf's Second Interrogatories and Request for Production of Documents w/cert of service and attachment.
5/29	152.	Deposition of (UNDER SEAL)XXXX Volume I.
5/29	153.	Deposition of (UNDER SEAL)XXXXX continued. Volume II.
5/29	154.	Deposition of (UNDER SEAL)XXXX continued, Volume III.

DATE	N.R.	PROCEEDINGS
7/9	162.	Federal Deft's MOTION FOR PARTIAL SUMMARY JUDGMENT and Request for Oral argument w/proof.
7/9	165.	Federal Defts' MEMORANDUM IN OPPOSITION to pltfs mot. for partial summary judgment and in support of federal defts' mot. for partial summary judgment.
8/17	168.	Pltf's Reply to Federal Defts' Memorandum in Opposition to Dow's Motion for Partial Summary Judgment, w/exhibits.
8/17	170.	Exhibits 2 & 3 to Pleading #169 [168]. UNDER SEAL.
8/17	171.	Exhibits 4-5 to Pleading #169 [168]. UNDER SEAL.
8/17	172.	Exhibit 7A to Pleading #169 [168].
9/11	178.	Pltf's Pretrial Motion for Protective Order w/brief and proof.
9/14	181.	Deft's Motion for Partial Summary Judgment or in the Alternative to Dismiss w/ Memorandum in Support of.
9/24	184.	Pltf's Response to Federal Deft's Motion for Partial Summary Judgment or in the Alternative to Dismiss w/attachments and proof.
10/13	187.	Federal Deft's Response to Dow's Opposition to Motion for Summary Judgment or in the Alternative to Dismiss w/cert of service, and affidavits.
10/19	196.	Not. of Oral Hearing on Cross Motions for Summary Judgment set for 11-12-81 @ 1:30 p.m.

DATE	N.R.	PROCEEDINGS
10/27	198.	Stip and Order of Dismissal as to Dept of Defense, Dept of Air Force, Dept of Navy, Central Intelligence Agency, Trident Engineering Associates, Inc., Lookheed Electronics, Inc and Northrup Corp. J. Harvey
11/5	202.	MEMORANDUM OPINION AND ORDER J. Harvey. Pltf's pretrial motion is hereby GRANTED. Court issues a Protective order, see order for details.
11/12	--	Oral Hearing on Cross Motions for SJ held.
1982		
4/19	213.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof The Court hereby GRANTS Dow's motion for partial summary judgment and DENIES EPA's cross-motion for summary judgment. On this basis; IT IS HEREBY ORDERED AND ADJUDGED that EPA is permanently enjoined and restrained from conduction [*sic*] future aerial surveillance and photography of the Dow Chemical manufacturing facility in Midland, Michigan, without first seeking judicial oversight which, at a minimum, will require EPA to secure an ex parte search warrant.
5/3	214.	Deft's Motion for Reconsideration w/ Memorandum and cert of service.
5/12	215.	Pltf's Response to Deft's Motion for Reconsideration w/proof.

DATE	N.R.	PROCEEDINGS
5/13	216.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof. IT IS HEREBY ORDERED AND ADJUDGED that EPA is permanently enjoined and restrained from conduction [*sic*] future aerial surveillance and photography of Dow Chemical Manufacturing facility in Midland, MI.
7/13	217.	NOTICE OF APPEAL by deft w/cert of service.
7/26	218.	MOTION by deft for Reconsideration or, in the Alternative, For Entry of Final Judgment.
7/28	219.	STIPULATION AND ENTRY J. Harvey.
7/29	220.	MOTION by Pltf for Protective Order w/ brief and proof and proposed order.
8/3	222.	MEMORANDUM OPINION AND ORDER J. Harvey Pltf's motion for protective order is hereby GRANTED.
8/4	223.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof. EPA's second motion for reconsideration is hereby DENIED. IT IS SO ORDERED.
9/23	227.	EX PARTE MOTION by deft's for Extension of Time to File Notice of Appeal w/Memorandum and cert of service.
9/27	228.	MEMORANDUM OPINION AND ORDER J. Harvey w/proof Deft's motion for extension of time to file a notice of appeal is hereby GRANTED. Deft's are DIRECTED to file their notice of appeal on or before 10-27-82.

DATE	*N.R.*	*PROCEEDINGS*
10/26	229.	NOTICE OF APPEAL by defts w/cert of service.
11/10	232.	TRANSCRIPT of Proceedings held on 11-12-81.
12/10	233.	ACKNOWLEDGMENT from CCA their case #82-1811.
1985		
6/17	250.	MOTION by deft [pltf] for Release of Items & Exhibits Under Seal.
6/25	251.	ORDER J. Churchill. Accordingly, Dow Motion is hereby GRANTED. IT IS THEREFORE ORDERED that the items and Exhibits currently held under seal by the Court be released into the care, custody, and control of the Dow attorneys for use during the appeal of this case after an inventory & Receipt of Items and Exhibits is made and filed.
7/1	253.	DEPOSITION of CLAYTON LAKE (EPA) taken July 14, 1981.
7/1	255.	DEPOSITION under seal by pltf.

RELEVANT DOCKET ENTRIES
— GENERAL DOCKET —

(United States Court of Appeals
for the Sixth Circuit — Case No. 82-1811)

APPEAL FROM: Eastern District of Michigan, N.D. at Bay City
NO. BELOW: 78-10044
JUDGE BELOW: Harvey
DATE OF JUDGMENT: July 28, and August 7, 1982
NOTICE OF APPEAL FILED: October 26, 1982

DATE		*FILINGS - PROCEEDINGS*
1982		
10/29	1)	Copy of notice of appeal filed; and cause docketed
11/15	2)	Motion: appellee for protective order (m-11/11/82)
12/2	8)	Pre-argument statement filed
1983		
1/13	11)	Order directing that the seal directed by the district court as to certain portions of the district court proceedings shall continue on appeal; counsel is to assure this Court is properly advised as to those materials under seal; briefs and appendix that contain information under seal should be filed in separate volumes; counsel may file a motion as to protective steps they recommend if the Court determines oral argument to be necessary (Peck, J.)

DATE		FILINGS – PROCEEDINGS
3/7		Brief (10) of appellant (m-3/4/83)
4/7		Brief (10) of appellee (m-4/5/83)
4/11		Brief (10) of amicus curiæ, Mountain States Legal Foundation (consent of both parties included in back of brief) (m-4/6/83)
5/5		Reply brief (10) of appellant (m-5/2/83)
9/26		Joint Appendix (5) with one sealed volume (m-9/22/83)
1984		
7/6	28)	Motion: appellee for protective steps for trade secret information at oral argument (m-7/5/84)
7/12		Cause argued by Anne S. Almy for appellant, by Jane Gootee for appellee and case submitted to the Court (Before: Lively, Merritt and Horton, JJ.)
11/9	31)	Judgment of the district court reversed (Lively, Merritt and Horton, JJ.) FP
1985		
2/19	33)	SUPREME COURT NOTICE: petition for cert. filed 2/7/85 (Sup. Ct. No. 84-1259)

MEMO DATED 12/20/60,
REGARDING DOW AERIAL PHOTO POLICY, ATTACHED TO DOW'S SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 9/25/80, AND AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 80 & 131

THE DOW CHEMICAL COMPANY

To: Chas. Sercu, 574 Bldg. Charge: _____
From: Ned Brandt, Pub. Rel. Problem or Auth.: _____
Subject: Attached Photos Date: 12/20/60 Bldg.: 690

No objection to any of these except the aerial shot of the plant, No. 75033. This one is so old I'd forgotten it existed, and it must have been made before the rule went into effect that we don't release aerial photos of the plant, which went into effect during wartime and per F. C. Peterson is still in effect. No. 4283B58 is a little borderline on this basis but OK, I think, on basis our usual practice. Therefore these all OK except 75033; if used in textbook, we would appreciate a credit line — "Photo Courtesy The Dow Chemical Co." or something similar.

MEMO /s/ Ned Brandt

• • •

LETTER DATED 11/27/73,
REGARDING AERIAL SECURITY, ATTACHED AS AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 131

November 27, 1973 *PLANES OVER THE PLANT*

Captains; Dispatchers – c; Scouts – c; Clockrooms: 2, 3, 4, 6, 11, 16, 19; Gates: West, 23, 25, 49; Inspectors; Patrolmen; File

REPORTING PLANES OVER THE PLANT

1. If you have field glasses, make an effort to get the plane number and description (color, size, number of engines, etc.).

2. If you have no field glasses, get the best description, direction of flight, etc., and call the nearest Plant Protection location (see below) that have field glasses so they can attempt to get this information.

3. Make a verbal report of same to this office at once or after hours contact the Captain on duty and also make a written report on same. Management is very much concerned when other than commercial passenger flights pass over the plant property.

   Locations that have field glasses are:

West Gate	#23 Gate
No. 6 Clockroom	#25 Gate
No. 11 Clockroom	Dispatcher 417 Bldg.

4. Dispatcher & Captains: When notified of an unidentified plane over the plant, assign an officer to spot the numbers with the glasses located in the radio room.

NOTE: The State Police Post in Bay City 684-2234 will check airplane *registrations* and help us on flights over the plant.

/s/ S. J. Humbyrd, Asst. Manager
Security & Plant Protection
417 Building

SJH/kh

NOTE: This cancels order on same dated 12-1-72

LETTER DATED 3/25/74, RE *DuPONT* v. *CHRISTOPHER*, ATTACHED AS AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 131

Mr. Michael Stinton
Dow Chemical
Midland, Michigan 48640

March 25, 1974

Dear Mike:

Pursuant to your request, I am forwarding a copy of the court decision, involving airplane photography of Du Pont's plant at Beaumont, Texas.

The only apparent follow up to the court's decision, aside from the Supreme Court's declining to review the decision, was Christopher's disclosure, by deposition, that he had been employed to take the photographs by Eber Peters, a management consultant from Beaumont. Peters testified, by deposition, that he was acting only for himself and that he planned to become a consultant on methanol marketing.

I trust that this was the case you had in mind. Hope the trip to Brussels was an enjoyable one.

Best regards,

Very truly yours,

Thomas J. Murphy, Jr.
Security Advisor

LETTER DATED 10/13/76, RE DOW PLANT SECURITY, ATTACHED TO DOW'S ANSWERS TO INTERROGATORIES FILED 5/2/80

DIST. CT. DKT. 56

DOW CHEMICAL U.S.A.
MICHIGAN DIVISION MIDLAND, MICHIGAN 48640

October 13, 1976

[*Addresses Deleted*]

I recently received the attached write-up concerning "Security of Process Know-how and Technology" from Irv Snyder.

The basic responsibility for protecting our process security has been assigned to the Division General Managers and I think you know that means I expect all of you to do a *thorough* job and keep me in good shape. The attached is a good review for all of us. It does an excellent job of covering the precautions that need to be followed.

Technology is the life blood of any company, especially ours, and the importance of protecting this technology cannot be overemphasized. Please see that the attached is given appropriate publicity in each of your departments.

Thanks.

/s/ J. G. Temple, Jr.

Attachment

SECTION 6 *No. 1*

SECURITY OF PROCESS KNOW-HOW AND TECHNOLOGY

The overall responsibility for protecting our process security has been assigned to the Division General Managers, Area Manufacturing Managers, and the Technology Center Managers.

The Manufacturing Representative plays a key role in protecting our process security when he is directing the design and construction of a new facility. He is responsible for seeing that the following are carried out during the course of a project.

1) Material balance flow sheets and detail process design manuals are extremely confidential and are restricted for the use of the Manufacturing Representative *only*. These items are not to be placed in the hands of an engineering contractor, vendor, etc. These items should be placed under lock and key at all times.

2) Every Dow drawing should include a statement, "This drawing is the property of The Dow Chemical Company, and the information contained herein must be treated as CONFIDENTIAL and not revealed to third parties nor may the drawings be reproduced in whole or part except by expressed permission of the Company.

3) If the project or equipment is of a secret nature, the contractor or supplier must sign a formal secrecy agreement. Serialized drawings must be returned to Dow.

4) Where we would prefer that the contractors or vendors do not know the material being handled, our equipment specification sheets, purchase orders, etc. should give the physical properties which are necessary for the equipment design without identifying the material by name or composition.

5) All information going to contractors or vendors should identify equipment by numbers, not by where it is located in the plant or by the process function it performs.

6) Vendors are forbidden to photograph the equipment at any stage of fabrication or reproduce the drawings pertaining to a purchase order to make them available to any source other than to The Dow Chemical Company without the written permission of Dow.

7) Photographs of the project or any part thereof shall not be taken. Contractors shall assist the owner in preventing photographs being taken. Cameras will not be allowed on the owners property

The line organization in each Area is responsible for seeing that the experience and background of prospective new employees are screened to try to determine if this person might later compromise our process know-how and technology.

Visits to our process units by outsiders are discouraged. In no case should tours by professional societies be permitted. Outsiders should not be exposed to our process technology. If people must allow visitors in a process unit, the tour guide must determine the name and company affiliation of each visitor. If a visitor will be exposed to process technology, he must sign a secrecy agreement. By definition, all of our control rooms contain Dow "Trade Secret" information.

/s/ Irving G. Snyder, Jr., Director
Technology Center Administration
2020 Dow Center

gw

9/16/76

LETTER DATED 10/22/76, RE DOW PLANT/PHOTO SECURITY, ATTACHED TO DOW'S SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 9/25/80, AND AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 80 & 131

DOW CHEMICAL U.S.A.
MICHIGAN DIVISION MIDLAND, MICHIGAN 48640

October 22, 1976

[*Addresses Deleted*]

PHOTOGRAPHY/SECURITY IN THE MICHIGAN DIVISION ON PROCESS KNOW-HOW AND TECHNOLOGY

Please pay special attention to points (6) and (7) regarding photography, and the final paragraph regarding plant visits.

If you have any questions, let's discuss.

/s/ Tom Sinclair
Government/Community Relations
47 Building

z

attach.

SECTION 6 *No. 1*

SECURITY OF PROCESS KNOW-HOW AND TECHNOLOGY

* * *

6) Vendors are forbidden to photograph the equipment at any stage of fabrication or reproduce the drawings pertaining to a purchase order to make them available to any source other than to The Dow Chemical Company without the written permission of Dow.

7) Photographs of the project or any part thereof shall not be taken. Contractors shall assist the owner in preventing photographs being taken. Cameras will not be allowed on the owners property.

* * *

• • •

LETTER DATED 7/7/77, RE DOW PLANT SECURITY, ATTACHED TO DOW'S ANSWERS TO INTERROGATORIES FILED 5/2/80, AND AN EXHIBIT TO MICHAEL KELYMAN (DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 56 & 131

DOW CHEMICAL U.S.A.
MICHIGAN DIVISION
July 7, 1977

[*Addresses Deleted*]

Just a reminder of the standing policy — No Michigan Division Plant or equipment photos may be released externally without approval of Tom Sinclair, Michigan Division Public Relations Manager, or Hunter Henry, Michigan Division General Manager.

/s/ Dave Sommers
Government/Community Relations
47 Building
636-6775

z

LETTER DATED 4/18/78,
REGARDING SUSPICIOUS AIRCRAFT OVER THE PLANT,
ATTACHED AS AN EXHIBIT TO MICHAEL KELYMAN
(DOW) DEPOSITION OF 3/25/81

DIST. CT. DKT. 131

April 18, 1978

Captains; Dispatchers

OBTAINING FOLLOW UP INFORMATION
ON SUSPICIOUS AIRCRAFT FLYING OVER THE PLANT

1. Determine if the actions of the pilot in flying over the plant are truly suspicious.
   a. Such as the plane circles around and over the plant 360° or more
   b. If the aircraft makes 3 or more passes over the plant either parallel or cross-secting the production facility.
2. Attempt to get the registration number.
   a. All U.S. registration No's begin with a N, they may range from N1 to N99999. There may be letters at the end of the number.
   b. We must have the complete number to request a registration check.
   c. Call a Mr. Don Arnold of Flight Service (FAA) located at Tri City Airport on 695-2361 (24 hour number)
   d. Call using 636-4400 and identify yourself as Dow Security and if Mr. Arnold is not available someone else should be able to help you.
3. If we are unable to get the registration number and it appears the aircraft in question can be deemed suspicious we should call Mr. Hank Anderson, the tower chief (F.A.A.) at Tri City Airport on 695-9143.

a. Call immediately and give the direction in which the aircraft in question is traveling.
b. Call from 636-4400, advising who answers that Dow Security is calling and we have a suspicious plane over the plant.
c. If the call is prompt and the direction given, the tower should be able to pick up the aircraft on RADAR
d. Depending on the volume of air traffic they will watch the aircraft to see if it lands at an airport on their screen. They will be able to pin point an aircraft within a 40 mile radius of their tower.
e. The tower will call 636-4400 and advise us what airport if any the airplane lands.
f. We should call the airport in question to determine who landed at that time. This call should be made promptly.

AIRPORTS

Alma, 3999 W. Seaman Rd.	463-1338	Gladwin, 735 S. State	426-4201
Bay City, 614 S. River Rd.	895-8991	Mt. Pleasant	772-3500
Caro	673-4301	Owasso, 1510 E. Main	723-4168
Flint, W. Bristol Rd.	767-4232	Saginaw	754-2459

• • •

JACK BROWN (DOW)
DEPOSITION EXCERPT 5/9/78

DIST. CT. DKT. 18

* * *

[9] * * * Q. Has the EPA had the opportunity to inspect the power plants in Midland?

A. Yes sir.

Q. And have they taken advantage of that opportunity?

A. Yes sir

Q. Have they had the opportunity – let me strike that.

Have they had complete tours through both of your powerhouses in Midland?

A. Yes sir.

Q. Have you participated in these tours with the personnel from EPA?

A. I did.

Q. You were there personally?

A. Yes sir.

Q. Okay. Do you recall when that inspection or when those inspections occurred?

A. It was in early September.

* * *

[10] Q. Do you recall how long those inspections lasted?

A. About two, two and a half hours.

Q. Were both powerhouses toured?

A. Yes sir.

Q. Did the inspectors from the EPA ask questions about the operation of the powerhouses?

A. They did.

Q. And did you provide answers to those questions?

A. We did.

Q. Now, subsequent to the visit as you've described it did the EPA request additional information about the powerhouses?

A. They did.

Q. And was that information provided?

A. It was.

Q. Do you know what was requested?

A. Yes, I do.

Q. And could you identify that for us, please?

A. Yes. They wanted some drawings or some information relative to the physical layout around each of the powerhouses and boilers and turbines themselves within the powerhouses.

Q. Did you assist in the preparation of that additional information?

A. I did.

Q. And you again recall the date of that inspection?

A. It was the first week in September, first or second week of [11] September.

Q. Was this in 1977?

A. Yes sir.

Q. Were there any subsequent attempts by the EPA to inspect the plant, the powerhouses?

A. Yes, there was.

Q. Do you recall when that occurred?

A. That was in December, about the first week in December.

Q. Can you describe the circumstances surrounding that attempt to inspect the plant, please?

A. Yes. There was an EPA engineer presented himself at one of our gates and had been observing the effluent from our stacks.

Q. Did he produce his credentials?

A. He did not to me at that time. When I met him he was already in the plant with one of our environmental engineers.

Q. Do you know whether or not he did present credentials at that time?

A. I do not, at that time.

Q. Are you aware of any other attempts by the EPA to inspect the power plants at the Midland facility?

A. Yes sir.

Q. And would you describe those attempts, please?

A. Subsequent to that a contractor for EPA was here on at least two occasions that I know of.

Q. Do you recall the dates?

[12] A. It was sometime in late December he made — at that time he made no attempts to come in. I was informed later he had been here.

However, in early February, which I believe was the first or second of February, this contractor for EPA did present himself at the gate.

Q. Was he admitted?

A. He was not.

* * *

[13] * * * Q. Does that report indicate the nature of the subsequent requests for information made by the agency?

A. It does.

Q. Does it indicate whether or not information — whether or not you provided them with any photographic information with respect to the power plants?

A. It does.

Q. Do you recall what you did provide them with?

A. Yes. We provided them with slides of — or photostats of slides showing the physical age of each of the powerhouses and the fuel capabilities.

Q. Did you subsequently and at the request of the EPA provide them with drawings of the power plants?

A. We did.

* * *

• • •

WILLIAM E. BEYER (EPA)
DEPOSITION EXCERPT 1/9/79

DIST. CT. DKT. 30

* * *

[19] * * * Q. And, that visit took place on September 9th, 1977, is that right?

A. I am sure it was September. If you say the 9th.

Q. Well, I am not testifying, you are. If you are not certain as to the date, you —

A. I am sure it was September.

Q. How long did that visit to the Midland Facility last?

A. As I remember, it was about three hours.

Q. And, was the visit motivated by an impending enforcement action, or a contemplated enforcement action by Region 5?

A. Yes.

Q. So, you were there, were you not, to make a determination, or to make an inspection to satisfy yourself as to whether or not there was, in fact, a violation of the Clean Air Act, is that correct?

A. Yes, that's correct.

* * *

[23] * * * Q. When you visited the Dow Facility in September of 1977, did you receive co-operation from the company in allowing you access to those areas you wanted to inspect?

A. Yes.

Q. And, what were the areas that you desired [24] to inspect?

A. The only areas that we had asked to inspect were the boiler plants.

Q. And, there are two of those, is that right?

A. Yes.

Q. And, you were allowed the opportunity to inspect them, is that right?

A. Yes.

Q. And, you spent approximately three hours in doing so?

A. As I remember, the whole visit took about three hours. Part of the time was used for some discussion.

Q. How much time — as you can recall now, how much of that three-hour period was spent in actually inspecting the facilities?

A. I would estimate two hours.

Q. Were you satisfied with the inspection that you made?

A. At the time, as I recall, yes.

Q. Did you secure the information from Dow that you went there to gather?

A. Again, as I recall, I have to say yes. I can't recall anything that I felt was missing.

[25] Q. And, again, the purpose of your visit was to determine the compliance of Dow's two power facilities with the Clean Air Act, is that right?

A. Yes.

Q. And, you secured enough information, did you, to make that determination when you visited the power facilities in September of 1977?

A. I felt before the visit that I had enough information to support, or to confirm that there was a violation, but the visit I felt was made to substantiate that.

Q. And, were you able to substantiate that in your mind?

A. I felt that I did, yes.

Q. And, again, you had the full co-operation of the Dow people when you were there?

A. Yes.

Q. And, they withheld nothing from you that you asked to inspect or see, is that right?

A. That's right.

* * *

[34] * * * Q. Okay. Now, in December of 1977 a second request was made to visit the Dow Facility, was it not?

A. I heard of it.

Q. Did you make that request?

A. I did not make it.

Q. In December of 1977, did you, as the engineer half of the attorney-engineer team, concerned with Dow's Midland Facility, did you feel that there was a need for any more data, from your standpoint, with respect to the power plants?

A. I can't recall any feeling that there was, that I needed any more.

Q. Your recollection today is that you had obtained, either prior to September 9th, or as a result of your September 9th visit, sufficient technical information from Dow, or from your [35] inspection to satisfy your particular requirements as to Dow's compliance or lack of compliance?

A. Yes.

* * *

• • •

MICHAEL SMITH (EPA)
DEPOSITION EXCERPT 11/2/78

DIST. CT. DKT. 29

* * *

[23] * * * Q. What requests were made subsequent to the September visit?

A. There was a request to enter the plant at a later date.

Q. Who made that request?

A. I did.

Q. And who did you make it of?

A. I believe I called Lou Pribila.

[24] Q. And do you recall the date?

A. In December.

Q. And do you recall the response you got then?

A. I got no response. The day of — Lou Pribila replied that he would check with management on the

day that I made the request. The day after I made the request, he called back and said that that — the request would have to be denied.

Q. All right. Did you advise him as to the reason that you wanted entry?

A. Yes.

Q. And what reason did you give him?

A. I told him that we wished to inspect the boiler facilities and the incinerator facilities.

Q. Did either your request in September or December of 1977 include a request to bring photographic equipment on to the premises?

A. In the December request, I mentioned that our engineers would be bringing a camera.

Q. And what was the reason for that?

A. To take pictures of the facilities and the lay out.

* * *

[34] * * * Q. Okay. Now, December 2nd, 1977, Pribila notified that Dow would not admit EPA personnel to the Midland facility, is that correct?

A. He notified us that we would not be allowed to enter on December 5th, that is correct.

Q. Well, that notice to you was on December 2nd, correct?

A. That's correct.

Q. Did there come a time after that telephone conversation between yourself and Mr. Pribila that a decision was made to take aerial photographs of the Dow Midland Facilities?

A. The decision to take aerial photographs came after that date, yes.

* * *

[41] * * * Q. Do you recall what the purpose of the aerial photography was, as represented to you at the time the flight was authorized?

A. Yes. The purpose was to support litigation in the case.

Q. That is under enforcement action under the [42] Clean Air Act?

A. That's correct.

Q. What particular information were you seeking by means of that aerial photography mission?

A. Well, a great deal of very general and specific information. We wanted to visualize any emissions that would have been coming out of the stacks, and to see the West Side Power Plant, and the South Side Power Plant, and the incinerator, and the layouts of those facilities, and the relationship of the other facilities within the plant to the town of Midland, surrounding the plant. We would also like to look at any effects on surrounding vegetation or notice of any emissions coming out of the facilities.

Q. Were those photographs intended to supply anything that had not previously been supplied to you by Dow?

A. Yes.

Q. And, what specifically?

A. I listed several. In addition — I have just listed several. In addition, the use of the [43] photographs would be to verify the information that had been submitted by Dow, and I have already said to actually visualize emissions.

Q. That could have been done, could it not, without recourse to an aerial photograph?

A. I don't know that it could or not.

* * *

[70] * * * A. Much of the information I have listed as being purposes for taking the photographs could probably have been obtained by exhaustive site inspections, walking around various parts of the plant by EPA personnel.

Q. And, that could have been conducted without any risk to Dow's proprietary technology and trade secrets, correct?

A. I don't know.

* * *

[87] * * * MR. GLEESON: We are back on the record. Mr. Smith, you were going to obtain for us the date that the Complaint was drafted. Have you secured that date for us?

THE WITNESS: A. Okay. The draft Complaint within this Agency is put together in the normal procedure. In an enforcement action, it is to put together a draft, and submit it with our litigation package. It is referred to the [88] Department of Justice. It would have been drafted sometime during the month of December, 1977.

Q. And, it would have been forwarded to Justice when?

A. It was formally referred to Justice on February 3rd, '78.

Q. And, let me ask you, prior to that referral to Justice in February of 1978, was it your intention to use any aerial photographs of the Midland Facility as direct evidence in an enforcement action against Dow?

A. Yes.

Q. Has your mind changed since that time about the value of these photographs as evidentiary value of these photographs in an enforcement action?

A. The value of the photographs that had been taken, or have been taken, the photographs don't meet some of the purposes to which aerial photography would. We didn't get pictures of plumbs, that sort of thing. We did get a good view of the relationship of the facilities to each other and their surroundings, and the surrounding scene.

* * *

JAMES O. McDONALD (EPA)
DEPOSITION EXHIBIT 1, 11/2/78

DIST. CT. DKT. 27

REGION V

FEB 3 1978

Aerial Photographs of Two Dow Chemical Corporation Boiler Plants and One Incinerator Plant at Midland, Michigan

James O. McDonald, Director
Enforcement Division

Dr. Dave McNelis, Director
Remote Sensing Division
Environmental Monitoring and Support Laboratory

This is to request aerial reconnaissance photographs of the facilities identified as (1) West Power, (2) South Power, (3) Incinerator, on the attached portion of the United States Department of Interior Geological Survey Map, Midland South, Michigan.

The Agency's objective is to use these photographs to support pending litigation. The purpose of these photographs is to visualize the emissions and to obtain perspectives of the facilities and their surroundings which cannot be obtained by other means.

We cannot predict when there will be excessive visible emissions from these sources. We feel that early morning or late afternoon are the opportune times for seeing emissions from coal burning.

In any event, we feel the photographs will provide valuable support for our enforcement efforts. Time is a significant factor, and we feel that we should have them by February 13, 1978, if it is at all possible. Please notify us no less than 48 hours in advance of your planned sur-

veillance, so that we, in turn, can notify the Company and the State air authorities, as we are required by the Clean Air Act. If you have any questions, please call Mr. William E. Beyer of the staff at (312)-353-2086.

ORIGINAL SIGNED BY
/s/ James O. McDonald

Attachment

• • •

DEFENDANT'S (EPA's) ANSWERS TO PLAINTIFF'S (DOW's) FIRST INTERROGATORIES

DIST. CT. DKT. 22 — FILED 6/29/78

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
NORTHERN DIVISION

[*Caption Not Printed*]

* * *

Interrogatory No. 2
Please state whether the defendant or anyone acting upon his behalf has taken or has caused to be taken any photographs, aerial or otherwise, of any of plaintiff's manufacturing facilities.

Answer No. 2
Yes. The only photographs taken of Dow's Midland facilities at the request of EPA were taken by Abrams Aerial Survey in February, 1978. For further information, see Answer to Interrogatory No. 4.

* * *

Interrogatory No. 4
At any time, did the defendant or anyone acting in concert with the defendant contract or hire or otherwise

direct Abrams Aerial Survey Corporation or any other person to photograph Dow's Midland, Michigan production facilities?

Answer No. 4
Yes.

* * *

Interrogatory No. 6
Was the film used by the defendant, or at the defendant's direction in the taking of photographs of any of plaintiff's manufacturing facilities at Midland Michigan, processed or developed?

Answer No. 6
Yes.

Interrogatory No. 7
If the answer to No. 6 is in the affirmative, were any prints made from the negatives?

Answer No. 7
Yes.

Interrogatory No. 8
If your answer [sic] to No. 6 and 7 are in the affirmative, please identify by whom such processing, development and printing was undertaken, the date, and the place of such processing, developing and printing. Please describe how many copies of each and every photograph so taken and processed were made, and identify the present whereabouts of each and every photograph.

Answer No. 8
a) Jimmy Hampton of the EPA Environmental Monitoring and Support Laboratory-Las Vegas processed the film on February 8, 1978 and printed 3 sets of color contact prints. On February 9, 1978, Bill Fowler produced test prints and five sets of color enlargements from 10 negatives in Las Vegas. All contact prints, and enlargements

and test prints are now in the possession of the Clerk of the United States District Court, Eastern District of Michigan, Northern Division. (b) Photographs and portions of photographs given to Dow Corning by agreement of the parties to this action are presumably still in Dow Corning's possession.

* * *

Interrogatory No. 20
Was the Michigan State Air Pollution Control Commission, its staff, the Michigan Department of Natural Resources, the Attorney General of the State of Michigan or any other agency of the State of Michigan, notified or in any other way involved with the photographing of the plaintiff's production facilities at Midland, Michigan?

Answer No. 20
No.

* * *

Interrogatory No. 39
If the aerial photographing of the plaintiff's Midland, Michigan production facilities was pursuant to an enforcement action under the Clean Air Act, (42 U.S.C. 1857c-9), please identify which portion of the plaintiff's production facility at Midland, Michigan, was the subject of such inquiry.

Answer No. 39
The aerial photography was taken in connection with an enforcement action against the Dow Chemical Company, which action would be brought under 42 U.S.C. § 7413 (formerly 42 U.S.C. § 1857c-8); the incinerator and the West side and South side power plants were the subject of such inquiry.

* * *

Interrogatory No. 47
Has anyone with experience in photographic analysis, photographic enhancement, or photographic reconnaissance examined or viewed any of the photographs described in your answer to any of the preceding interrogatories?

Answer No. 47
Yes.

* * *

• • •

AFFIDAVIT OF CLAYTON E. LAKE (EPA) DATED 6/10/81, IN SUPPORT OF U.S.'s RESPONSE TO DOW's OPPOSITION TO U.S.'s MOTION FOR SUMMARY JUDGMENT FILED 10/13/81

DIST. CT. DKT. 187

Clayton E. Lake, being duly sworn, deposes and says:

THAT I am employed by the U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory-Las Vegas, Nevada (hereafter EMSL-LV) in the capacity as Project Manager in the Advanced Monitoring Systems Branch (AMS) (formerly, Remote Sensing Operations Branch, RSO.)

THAT a copy of the letter requesting EMSL-LV for photographic support of facilities in Midland, Michigan was received by me from Mr. James O. McDonald, Director, Enforcement Division, EPA Region V, via telefax on Friday, February 3, 1978.

THAT on Monday, February 6, 1978 I received bids via telephone for cost of data collection. Abrams Aerial Survey (hereafter Abrams) located in Lansing, Michigan was awarded the contract on this date.

THAT I requested Abrams verbally to return flight maps, flight cards and exposed film via air baggage to EMSL-LV (AMS) for processing. This is a normal procedure that EMSL-LV (AMS) requests of all its contractors.

THAT on Tuesday, February 7, 1978, Abrams reported to me via telephone that the photogaphic mission was conducted that day from 1415 to 1452 (EST) with film and flight information being shipped via United Airlines small package express, scheduled to arrive in Las Vegas on flight 711 February 8, 1978 at 1135 a.m. (PST).

THAT on Tuesday, February 7, 1978, I completed Form RDS-10 which designated the material as restricted information along with photo lab requirements to be conducted by authorized personnel.

THAT on Wednesday, February 8, 1978 mission film was picked up at the airport by Mr. Jimmy Hampton. He processed and produced color contact prints giving film, prints, flight card and map to me as a normal procedure, on that date.

THAT on Thursday, February 9, 1978, Bill Fowler produced five sets of color enlargements from ten negatives. It is a normal procedure to send the requesting Region three sets of enlargements. EMSL-LV (AMS) maintains any extra sets in its locked files.

THAT on Friday, February 10, 1978 data information blocks giving time, scale, sites and north arrows were mounted on enlargements and I sent the package to EPA Region V via TWA "Next Flight Out", flight 780, for Mr. William Beyer to pick up at the airport.

THAT mission film and extra prints were placed in a locked secure metal cabinet by me and I maintained the only key, thus restricting access to data. No one received the key from me, to enter the cabinet, during the time this data was at EMSL-LV.

THAT on Monday, April 10, 1978, I sent mission film and enlargements via Certified Restricted Mail to Mr. Thomas Woods, Assistant U.S. Attorney in Detroit, Michigan, in response to the request of Mr. Mike Smith of EPA, Region V.

THAT on Thursday, April 13, 1978 I sent all originals and copies of the original maps and flight information provided by Abrams via Certified Restricted Mail to Mr. Thomas Woods, Assistant U.S. Attorney, Detroit, Michigan, purging EMSL-LV files of said materials and information. This action was in response to the request of Mr. Mike Smith of EPA Region V.

THAT on July 13, 1978, I discovered a roll of contact prints in a drawer of the locked secure metal cabinet, that I had inadvertently overlooked during my April 10, 1978 search for pertinent materials. That, further, I immediately notified Dorothy Attermeyer, Office of Regional Counsel, EPA Region V regarding my oversight and sent the material via Certified Restricted Mail directly to Mr. Thomas Woods, Assistant U.S. Attorney, Detroit, Michigan, finally purging EMSL-LV files of all related materials and information. During this period, I remained the sole possessor of the key to the cabinet and no one received the key from me to gain access.

Further Affiant says naught.

/s/ Clayton E. Lake

[*Jurat Not Printed*]

CLAYTON E. LAKE (EPA)
DEPOSITION EXCERPTS 2/7/79

DIST. CT. DKT. 41

* * *

[29] * * * Q. And after you had made a determination that Abrams would be able to conduct the overflight, what directions did you give them for undertaking that work for you?

A. I first gave them about three different altitudes to fly over.

Q. And, what were those altitudes?

A. 1,200 above ground, 3,000 and 12,000.

Q. And, did you give them any directions as to the type of camera or film that they should use?

A. Right. We wanted color film.

Q. Did you make any specification as to the type of camera that they would use?

A. We requested either Zeiss, Wild, or a camera equal to their specs.

Q. Why would you want to utilize that [30] particular type of camera?

A. Some of those small companies have old antique cameras, which does not give you good color rendition, so we request this type of camera, which does give you fairly good color.

Q. Was there a reason that you were particularly interested in color?

A. We always seem to determine more from a color photograph. It is just easier to study.

Q. Did you make any — did you specify to Abrams what type of film they should use?

A. I believe I did. I think that is on our — it would be on our purchase order, color film.

Q. This form right here (indicating)?

A. Yes, right there, color film. All they had in stock was 2445. I told them they could use that.

Q. This is, for the record, Lake Deposition Exhibit No. 2N. On that exhibit you indicate, and maybe you can refer to your copy of it, and correct me if I am wrong, you indicate there a description of the job. "Collect aerial photographic data only, of three industrial sites in Midland, [31] Michigan for support in pending litigation. Approximately 53 exposures of vertical and obliques will be required at two different altitudes using Zeiss, Wild or 6 inch FL aerial mapping camera with equal resolution and aerial color film. Film to be returned to Las Vegas via airline ticket counter to ticket counter for processes." Is there a distinction between a Zeiss and a Wild camera?

A. They are both very similar. There is differences, but not much difference.

Q. Are you familiar with those cameras?

A. Yes, sir, I am.

Q. Are they capable of high resolution photography?

A. The manufacturers say that they have between 40 and 45 lines.

Q. What does that translate out to you, as far as the definition of photographs?

A. Also, you have a lot of variance. You have atmospheric conditions, you have a large variance. The numbers they give you is run off a test bench, which they give you these lines, which is average resolution.

[32] Q. What does that resolution figure mean to you as a photographer, if you see that number? What does it mean to you, as far as the capability of the camera to take high resolution film?

A. That would be a good aerial mapping camera.

Q. Do you, in fact, know what type of camera Abrams used to secure the photographs of the Dow Plant?

A. They told me they had an RC-10.

Q. What is an RC-10?

A. RC-10 is the same as RC-8, except you can change the lens.

* * *

Q. What is an RC-10 used for?

A. Aerial mapping, mainly, topographic.

* * *

[66] * * * Q. And, after you received the film here — it was received in Las Vegas?

A. Yes, sir.

Q. By what manner?

A. It came by — it seems like it was United. It came baggage to baggage.

Q. Air Freight?

A. Not really Air Freight. It is handled like baggage.

* * *

[67] * * * Q. Did you participate in the processing of the film?

A. No, sir.

Q. And, after the film was processed, did you then view the film?

A. Yes, sir.

Q. And certain enlargements of that film were prepared, were they not?

A. Yes, sir.

* * *

LAKE DEPOSITION EXHIBIT 2D

2 × Enlargements of the following

Frame	*Enlargement scale*	*Time*	*Sites*
9471	1″ = 1000′	2:16 p.m.	Dow Chemical Facilities
9478	1″ = 250′	2:26	West Power Plant
9481	1″ = 250′	2:30	South Power Plant
9500	oblique	2:31	Dow Chemical Facilities
9507	1″ = 100′	2:45	West Power Plant
9518	1″ = 100′	2:47	Incinerator
9527	1″ = 100′	2:50	South Power Plant
9535	oblique	2:51	Incinerator
9537	oblique	2:52	West Power Plant
9541	oblique	2:53	South Power Plant

Total 50

LAKE DEPOSITION EXHIBIT 2E

6" FL lens (50397, 48, or 2445)
60% forward overlap RSD 7816

Flight Line	*length*	*width/ coverage*	*alt/AGL*	*scale*	*frames*
Vert. 1	3 miles	4,500'	3,000	1" = 500'	9
Vert. 2	3 miles	4,500'	3,000	1" = 500'	9
overall (oblique)	roll aircraft		approx. 3,000		2
Vert. Facility #1	1 mile	1350'	1200'	1" = 200'	9
Vert. Facility #2	1 mile	1350'	1200'	1" = 200'	9
Vert. Facility #3	1 mile	1350'	1200'	1" = 200'	9
(fly aircraft slow as possible for image motion)					
Oblique Facility #1		approx 1200' AGL			2
Oblique Facility #2		approx 1200' AGL			2
Oblique Facility #3		approx 1200' AGL			2
					53 frames

(1) 5 Ft unexposed film on each end for control strip

(2) Record emulsion number of film, photographers and pilots name, flight log & map.

2445

LAKE DEPOSITION EXHIBIT 2G

TECHNICAL SERVICES REPORT

(Read instructions on reverse before completing form)

1. *LABORATORY PERFORMING PROJECT:* EMSL-LV
2. *PROJECT NO.:* RSD 7818
3. *LOCATION OF* Activity: Midland, MI V
4. *TYPE OF* Activity: Remote Sensing
5. *REQUESTER:* James McDonald
   Director, Enforcement Division
6. *OBJECTIVES:*
   Collect aerial photographic data of three industrial sites in Dow Chemical facilities located in Midland, Michigan (West Power, South Power and Incinerator).

   The data is to visualize the emissions and to obtain perspectives of the facilities and their surroundings.

   Mission data to be used as support in pending litigation.
7. *DELIVERABLES:*
   1. Flight Report.
   2. Color oblique and vertical photographic coverage.
   3. Assistance in photo interprtation [*sic*] (Limited due to snow coverage).
   4. Final delivery shipped Feb. 10, 1978.
8. *Staff-Hours:* 15
9. *COSTS:*
   MATERIAL: $254.00 *TRAVEL:* _____
   Contract: $2,078.44
10. *Date Request:* 2/3/78 11. *Date delivered:* 2/10/78
12. *P.E. No.:* 1HD622 13. Major Equipment Utilized
14. *REMARKS:* Project Completion Report with Actual Cost.
15. *PREPARED BY:* /s/ Clayton E. Lake
16. *DATE:* 3/7/78

EPA Form 5340-1 (77) Revised

AFFIDAVIT OF THOMAS M. SCHAFER (ABRAMS AERIAL, INC.), ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 3

THOMAS M. SCHAFER, being duly sworn, deposes and says:

THAT he is employed by Abrams Aerial Survey Corporation, Lansing, Michigan, in the capacity of Vice President of contracting;

THAT Abrams Aerial Survey Corporation (hereafter Abrams) is engaged primarily in the business of aerial mapping and aerial photography;

THAT Affiant is familiar with the technology, methods and business practices of Abrams in said aerial mapping and photography;

THAT on February 6, 1978, Abrams received an order for services by telephone from Clayton Lake, an employee of the United States Environmental Protection Agency (hereafter EPA), Las Vegas, Nevada office, for EPA purchase order CB-8-0189-A;

THAT said purchase order placed with Abrams by EPA directed Abrams to take aerial photographs of the Michigan Division, Midland plant of The Dow Chemical Company located at Midland, Michigan as soon as business schedules and weather conditions would permit;

THAT said EPA purchase order directed that said aerial photographs be taken from an oblique perspective at altitudes of 3,000 and 1,200 feet from the west side looking to the east of said Midland plant and from the northwest side looking to the southeast of said Midland plant;

THAT said EPA purchase order also directed that vertical flight lines at altitudes of 12,000, 3,000 and 1,200 feet be flown over said Midland plant;

THAT it is impossible for Affiant to specify the particular flight lines due to the fact that the EPA purchase order directed Abrams to furnish all original aerial negatives, the flight data card for the job executing said purchase order and the flight map of same which items would, in the ordinary course of business, have all been retained by Abrams;

THAT Affiant is informed that on February 7, 1978, at approximately 3:00 p.m., one Michael Mills, an employee of Abrams, in a twin engine Beechcraft airplane, flew over the area of said Midland plant located at Midland, Michigan, and with a Wild RC-10 certified mapping camera with 6-inch lens, having a focal length of approximately 150 millimeters, piloted said plane while one Richard Miller took approximately 100 exposures on Kodak aerocolor negative film #2445 in accordance with the instructions given by said Clayton Lake;

THAT upon landing in accordance with the instructions of said purchase order, employees of Abrams placed the exposed film in a closed container and transmitted same together with the aforesaid flight data card and flight map to the United States Environmental Protection Agency, Las Vegas, Nevada at P. O. Box 15027 on a United Airlines flight;

THAT based on Affiant's knowledge of aerial photographs, techniques, methods and processes, aerial negatives taken from a vertical perspective at approximately 1,200 feet with the aforesaid equipment and film is capable in the hands of a competent photographic technician, of enlargement to a scale of approximately 1 inch equals 20 feet without significant loss of resolution;

THAT based on Affiant's knowledge of aerial photographs, techniques, methods and processes, aerial negatives taken from a vertical perspective at approximately

3,000 feet with the aforesaid equipment and film is capable in the hands of a competent photographic technician, of enlargment to a scale of approximately 1 inch equals 50 feet without significant loss of resolution;

THAT based upon Affiant's knowledge of aerial photographs, techniques, methods and processes, aerial negatives taken from a vertical perspective at approximately 12,000 feet with the aforesaid equipment and film is capable in the hands of a competent photographic technician, of enlargement to a scale of approximately 1 inch equals 400 feet without significant loss of resolution.

Further Affiant says naught.

/s/ THOMAS M. SCHAFER

[*Jurat Not Printed*]

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CLAYTON LAKE (EPA)
DEPOSITION EXCERPT 7/14/81

DIST. CT. DKT. 253

* * *

[49] * * * Q. Mr. Lake, back to your document here, the publication that we have been referencing in the deposition, the Lake Deposition Exhibit No. 1, would you look at Page 10, please, where we talked about aerial cameras. In the second full paragraph you reference RC-8, RC-10 Zeiss, or equivalent cameras. And over on Page 11 you say about the third line down:

"Mapping cameras are particularly desirable because geographic distortion is minimal."

What do you mean by that? Can you say, do you know what that means?

A. Like these are using mapping cameras and you have very small distortion. Unlike some cameras where on the edge of the frame it is going to be really stretched out of proportion, maybe oblong or something of that nature, and your mapping [50] cameras are not stretching out of proportion, it's pretty much distortion-free and helps with your interpretation.

Q. If I take my camera, my hand held Brownie or Polaroid camera, would that distortion element be introduced there as a factor —

A. I don't know which camera you would be using.

Q. Would the ability of a mapping camera to take photographs with minimal geometric distortion be superior to a camera that the average person might use?

A. May not have as good a resolution of some of your other cameras.

MR. ALLEN: What kind of cameras are we talking about here? We have run the gamut from an Instamatic to a Hasselblad.

* * *

Q. (BY MR. GLEESON) If you were using or you were going to take an aerial photograph for your purposes, would you prefer a mapping camera to the type of camera Mr. Allen was discussing?

A. Some of your smaller cameras have better resolution or may be sharper.

Q. How about that geometric distortion?

A. Your mapping camera is better for that, what they use for making maps, a better camera for measurement.

* * *

[80] * * * Q. Now, you talked about the problem of distortion, the ability of an aerial mapping camera for distortion. What type of distortion were you talking about?

A. You have optical distortion with every lens you have, a certain optical distortion, and your mapping cameras are pretty well calibrated and ground to have less distortion than your regular cameras.

* * *

[81] * * * Q. You said something about hand held cameras offering better resolution or comparable resolution to an aerial camera. What did you mean by that?

A. Some of your cameras will actually be able to resolve more information that is on the ground than what your aerial mapping camera would. The disadvantage would be as far as doing measurements. You could do measurements with it but would be a little more difficult than your regular mapping camera.

Q. What kind of cameras are you talking about here? 35 millimeter?

A. Can either use 35 millimeter or 70 millimeter.

Q. With what kind of lens? With the 70, a standard lens?

A. Some would be commercial right off the shelf.

Q. And using any special kind of film?

A. We are just using any commercial film ourselves, and anyone can purchase it, the commercial film.

Q. If all you are interested in is picking up precise [82] detail of an object on the ground using aerial photography and your objective is getting as much detail and resolution that you are able to pick up, what would be the better sort of camera to use for that?

A. I would probably use either a Nikon, Hasselblad and a telephoto lens in a helicopter.

Q. As opposed to an aerial mapping camera?

A. If you're going for detail.

Q. But for topographical measurements and relationships?

A. I would use a mapping camera.

* * *

[84] * * * Q. So is it your testimony, Mr. Lake, just jumping back to the question of aerial photography, that you can obtain comparable results as far as detail is concerned using a hand held 35 millimeter or 70 millimeter camera as with an aerial camera such as the RC-10?

A. Correct, and in some cases you would have better resolutions with a hand held camera because at least with a helicopter you can fly at lower altitudes and still be under FAA regulations where in fixed wing aircraft you have to fly at higher altitude.

MR. ALLEN: Okay. I have no further questions.

FURTHER EXAMINATION

BY MS. GOOTEE:

Q. Mr. Lake, if the purpose of the aerial photography mission was to obtain the best data so that you could make measurements and plot what was on the ground, would you use a mapping camera or one of your hand held cameras?

A. Like I mentioned before, we are mainly set up — [85] now, I feel we are getting nit-picky on detail. We are mainly set up — we are not trying to pick a little two inch object on the ground. We are trying to mainly photograph an area and see if it does comply with certain regulations that does [*sic*] exist on the books.

So we are set up mainly for aerial mapping. All of our equipment is designed for aerial type film and with the hand held cameras we have on stock, have a much shorter focal length, and when we contract work I would doubt very seriously if Abrams would have a hand held camera either, so — when you contract a mapping company for that you give them coordinates and you have them fly the coordinates for you.

Q. Did I hear you say you are not really interested in detail?

A. We are interested in detail, but I thought we were getting too nit-picky when talking about very small items. Flying at 1,200 feet above ground you are using a 6-inch lens. We never are required to have any more detail than that. In most cases we are very happy with one square inch or 500 feet to the inch, in most cases.

Q. And if that is good enough and the hand held 35 or 70 millimeter cameras give you good resolution, why don't you use the cheaper camera then?

A. Because we are set up — it is easier for us since [86] we are set up for vertical aerial mapping like our printers — we have aerial printers and our cameras are aerial cameras. * * *

. . . plus we find it takes less film, less exposure, less time in doing our type of work, doing the aerial mapping, because if you are using 70 or 35 millimeter film, you are going to have millions of frames to look through and trying to look through those little frames under the stereo table, what we have, wouldn't be feasible and really for us is more cost effective using the nine inch mapping camera.

* * *

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AFFIDAVIT OF WILLIAM E. BEYER (EPA) DATED 6/15/81, IN SUPPORT OF U.S.'s RESPONSE TO DOW's OPPOSITION TO U.S.'s MOTION FOR SUMMARY JUDGMENT FILED 10/13/81

DIST. CT. DKT. 187

1. My name is WILLIAM E. BEYER. I am an environmental engineer for the United States Environmental Protection Agency, Enforcement Division in Region V. In 1977, I was assigned to investigate the compliance status of the Dow Chemical Company facilities in Midland, Michigan with the Michigan implementation plan approved under the Clean Air Act.

2. I picked up the photographs of the Dow facilities that had been ordered by Region V from the Environmental Monitoring Laboratory in Las Vegas at the freight terminal at O'Hare airport on February 10, 1978. I brought them to my office where I kept them either on the floor or on the heating duct near my desk. I gave the enlargements to Steve Rothblatt within a week after receiving them and retained the rolls for a longer time, perhaps four weeks altogether. I turned the rolls over to the docket clerk on or about March 13, 1978.

3. During the time that the photos were in my office they were viewed by several EPA enforcement personnel. They were not examined by anyone outside the Agency in my presence and, to my knowledge, were not examined by anyone outside the Agency in my absence.

Further affiant sayeth not.

DATE: June 15, 1981 /s/ William E. Beyer

[*Jurat Not Printed*]

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AFFIDAVIT OF STEPHEN H. ROTHBLATT (EPA) DATED 6/15/81, IN SUPPORT OF U.S.'s RESPONSE TO DOW's OPPOSITION TO U.S.'s MOTION FOR SUMMARY JUDGMENT FILED 10/13/81

DIST. CT. DKT. 187

1. My name is STEPHEN H. ROTHBLATT. I am a manager for the United States Environmental Protection Agency in Region V. I was chief of the Engineering Section of the Air Enforcement Branch in the Enforcement Division during the time that EPA had photographs taken of the Dow Chemical Company facilities in Midland, Michigan.

2. On or about February 13, 1978, William Beyer transferred some enlargements of the Dow photos to me. There were two very large photographs of the boiler plants taken from both an overhead and an oblique viewpoint which I hung on the wall of my office. The remaining enlargements I kept on my desk or on a table in my office. On or about March 13, 1978, I transferred the enlargements to the docket clerk.

3. During the time that the photos were in my office they were viewed by several EPA enforcement personnel. They were not examined by anyone outside the Agency in my presence, and, to my knowledge, were not examined by anyone outside the Agency in my absence.

Further affiant sayeth not.

DATE: June 15, 1981 /s/ Stephen H. Rothblatt

[Jurat Not Printed]

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AFFIDAVIT OF H. V. (JACK) WAIT, JR. (DOW) DATED 7/30/81, IN SUPPORT OF DOW'S REPLY RE SUMMARY JUDGMENT FILED 8/17/81

DIST. CT. DKT. 168

H. V. (Jack) Wait, Jr., being duly sworn, deposes and says:

THAT I am the Section Manager, Chlor-Alkali/Brine Chemicals, of the Michigan Division of The Dow Chemical Company.

THAT I have examined the EPA photographs of Dow's Midland facility, which photographs are the subject matter of *Dow* v. *EPA, et al,* Case No. 78-10044, under magnification.

THAT during such examination I have discerned items or equipment as small as ½ inch in diameter in the EPA photographs

Further Affiant says naught.

/s/ H. V. (Jack) Wait, Jr.

[*Jurat Not Printed*]

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AFFIDAVIT OF SHERMAN HOLLANDER (MICH. DNR) DATED 8/4/81, IN SUPPORT OF DOW's REPLY TO U.S.'s OPPOSITION TO DOW's MOTION FOR SUMMARY JUDGMENT FILED 8/17/81

DIST. CT. DKT. 168

SHERMAN HOLLANDER, being duly sworn, deposes and says:

THAT I am employed by the Michigan Department of Natural Resources (DNR) Division of Land Resource Programs.

THAT I have access to and control over DNR aerial photographs.

THAT I sent a 10 × 10 inch color infrared transparency of frames 81-66-172 and 80-65-35 to Clayton E. Lake of Las Vegas, Nevada, in May of 1981.

THAT frames 81-66-172 and 80-65-35 were taken at an attitude [*sic*] of 12,000 feet, at a vertical angle and at a contact scale of 1:24,000 (equivalent to 1 in. = 2000 ft.).

Further Affiant says naught.

/s/ Sherman Hollander

[*Jurat Not Printed*]

AFFIDAVIT OF MICHAEL KELYMAN (DOW)
ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 2

MICHAEL (NMI) KELYMAN, being duly sworn, deposes and states:

THAT he received a Bachelor of Science Degree in Metallurgical Engineering in 1956 and a Master of Science Degree in Industrial Management in 1957, both from Purdue University;

THAT he was employed by The Dow Chemical Company (DOW) on May 5, 1958 and has been a full-time employee since that date;

THAT he has had experience in various capacities including Manager of Safety for the Michigan Division and, most recently, was appointed Manager of Security and Plant Protection for the Michigan Division of Dow Chemical U.S.A., an operating unit of DOW;

THAT he is directly responsible for the security of the Midland production facility of the Michigan Division;

THAT about one hundred employees are directly involved in maintaining the security of the Midland production facility;

THAT he is especially responsible for the security and protection against unauthorized disclosure of DOW's proprietary process technologies which are being employed in the Midland production facility;

THAT in securing the Midland production facility to guard against losing any proprietary process technology, the following several precautions are being taken:

1. A chain-link fence at least 8 feet high has been installed completely around the production facility;

2. gates for ingress and egress at various intervals in the fence have an attendant (guard) on duty when any given gate is in operation to admit or allow people to leave the facility;

3. closed-circuit television surveillance for continuously monitoring the various entrance and exit gates and to monitor the area along the fence surrounding the facility;

4. alarm systems which will indicate unauthorized entry at various locations;

5. motion detectors at strategic locations to indicate movement of personnel in certain restricted areas within the facility;

6. roving patrols which travel throughout the facility and around the perimeter to augment the other security systems;

7. liaison with local public law enforcement officials including radio communication to assist in the apprehension of persons engaged in unlawful activities relating to the production facility;

8. employees entering the facility must exhibit an identification badge in every instance of entry;

9. non-employees who wish to visit the facility must be approved and must obtain a visitors pass including a badge which must be exhibited at all times while in the facility;

10. non-employees who have been approved to visit are still greatly restricted in their movements and some areas of the facility remain off-limits to all non-employees;

11. cameras by anyone other than an authorized representative of DOW are prohibited at all times and in all places in the facility; and

12. persons visiting for technical reasons must obtain a technical pass which provides among other things that the visitor will not disclose any technical information learned as an incidence to his visit;

THAT security personnel are on duty twenty-four hours a day and seven days a week with at least twenty-five such people on duty at all times and with about fifty people on duty during normal duty hours;

THAT DOW spent at least about 3.25 million dollars in each of the last ten years on the security of the Midland production facility; and

THAT in the event the engineering drawings and/or blueprints of a specific production plant were to be disposed of, for example, at the conclusion of construction, the drawings and/or blueprints would be packaged and incinerated under the direction of security personnel who would also witness the incineration.

FURTHER Affiant sayeth naught.

/s/ Michael (NMI) Kelyman

[Jurat Not Printed]

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AFFIDAVIT OF LEROY L. MASTIC, JR. (DOW)
ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 4

LEROY L. MASTIC, JR., being duly sworn, deposes and states:

THAT he received Bachelor of Science degrees in Mathematics and Chemical Engineering in 1954 and a Master of Science degree in Chemical Engineering in

1955 from the University of Michigan, is a Professional Engineer licensed by the State of Michigan and a member of the American Institute of Chemical Engineers;

THAT from 1955 to 1957 he served in the United States Army in a medical research facility doing work involving the irradiation of biological systems;

THAT he has since 1957 been employed by The Dow Chemical Company in various manufacturing capacities relating to the production of hydrocarbons and monomers and of polyvinylic resins;

THAT since 1973 he has been employed by The Dow Chemical Company as the Manager of the Organic Chemicals Production Department, Michigan Division, Midland, Michigan;

THAT in said capacity he has supervisory authority over the operation of a number of organic chemical production facilities located in said Michigan Division Midland plant, one of which is a production facility for the production of chlorinated benzenes;

THAT in said capacity he is intimately familiar with the process, equipment, design and technology incorporated in said chlorinated benzenes (CB) production facility and with other processes, equipment and technology employed commercially and taught in published literature pertaining to the production of CB;

THAT the aforesaid CB production facility includes a new production segment which just became operational in late 1977 and which new segment incorporates a newly developed process and technology for which process research and development costs incurred by The Dow Chemical Company over the last ten (10) years, are in excess of one and a half million dollars ($1,500,000);

THAT said newly developed process and technology permit The Dow Chemical Company to selectively produce the chlorinated benzenes;

THAT with respect to said newly developed process and technology, Affiant knows of no disclosure of same in the published literature nor of disclosure of same by The Dow Chemical Company to other than its employees, and believes that same is unique to The Dow Chemical Company Midland plant;

THAT Affiant is informed that on or about February 7, 1978, aerial photographs of said Michigan Division Midland plant, including the aforesaid CB production facility, were taken without authorization of The Dow Chemical Company by employees of Abrams Aerial Survey Corporation and which photographs are capable of enlargement and printing to show the area photographed on a scale of one (1) inch to twenty (20) feet;

THAT to the best of Affiant's knowledge, other than said February 7, 1978, episode of aerial photography the only other instances in which the Michigan Division Midland plant or portions thereof have been photographed from the air have been instances where The Dow Chemical Company has authorized such photography for its own use or benefit and on that basis Affiant, prior to February 7, 1978, had no reason to believe that unauthorized aerial photographs of said Midland plant or said CB production facility would be taken;

THAT based on the belief that no unauthorized aerial photographs would be taken of the aforesaid new segment it has, primarily for reasons of safety due to the explosive and toxic nature of the process reactants, been constructed in a manner which reveals various reactor equipment, loading and storage facilities, transfer lines,

motors and like equipment to view from an aerial perspective since same have not been enclosed within building structures;

THAT because of the location of said CB production facility well behind an eight (8) foot chain link fence surrounding the perimeter of the Michigan Division Midland plant, among and behind various other production facilities and buildings, the details of said new production segment which would be visible from an aerial perspective are not visible from outside said perimeter fence;

THAT Affiant is informed that at least twenty (20) other production facilities within the Midland plant are similarly constructed so that details of such production facilities would be visible from an aerial perspective which are not visible from outside said perimeter fence;

THAT at the Michigan Division Midland plant, The Dow Chemical Company exercises numerous general security measures such as restricting physical access thereto to authorized personnel only;

THAT with respect to said CB production facility under Affiant's supervision, supervisory salaried employees having access to same are required, upon hiring, to execute an agreement to maintain in confidence all trade secret or confidential technical or business of The Dow Chemical Company to which they have access and upon termination of employment are "debriefed" and reminded of their obligation with respect to specific technology to which they have had access;

THAT access to internal written report, engineering plans, blueprints, diagrams and operating manuals pertaining to said CB production facility is tightly limited and is restricted to those employees of The Dow Chemi-

cal Company having need for such items in the performance of their duties;

THAT technical visitors other than employees or contractors of The Dow Chemical Company are not routinely permitted access to said CB production facility and in instances when such access is granted, it is upon Affiant's authorization and issuance of a visitor pass to such an individual who is then accompanied by an employee of The Dow Chemical Company;

THAT such a technical visitor is not exposed to any equipment or technology contained in said CB production facility unless Affiant first determines that such exposure is required for business purposes of The Dow Chemical Company and that the visitor agrees to maintain in confidence any information pertaining to the facility which he may obtain by virtue of his visit;

THAT no photographs of said CB production facility are permitted from within the Midland plant without Affiant's authorization and then only for the use or benefit of The Dow Chemical Company;

THAT on information and belief and Affiant's experience as a chemical engineer, aerial photographs enlarged to the scale of one (1) inch to about one hundred (100) feet would reveal the unique feature of said CB production facility to a competent chemical engineer could deduce the purpose of and results obtained from such a feature and the attendent necessary modifications in a CB production process;

THAT aerial photographs enlarged to the scale of one (1) inch to fifty (50) feet or less of said CB production facility, in the hands of a competent chemical engineer, would be capable of use as an engineering diagram or blueprint for construction of a major portion of said CB production facility which would obviate the necessity to

incur most research and development and engineering costs for a like facility;

THAT without such aerial photographs Affiant believes that the process and technology incorporated in said CB production facility could not be reproduced by competitors technically skilled in the CB process art without considerable expense and effort, at least as great as that expended by The Dow Chemical Company to develop same;

THAT because of controlled selectivity of various members of the CB family which inures to The Dow Chemical Company from use of the unique process and technology incorporated in the Midland plant CB production facility, The Dow Chemical Company now enjoys the ability to adjust its CB product to the demands of the CB market to a much greater extent and in a more economic fashion than competitors who do not possess knowledge of said unique process and technology;

THAT a competitor of The Dow Chemical Company possessing aerial photographs of said CB production facility on the scale of one (1) inch to about one hundred (100) feet would likely and on the scale of one (1) inch to fifty (50) feet or less would certainly, in Affiant's opinion, be capable of employing the same unique process and technology incorporated in said CB production facility and thereby more economically compete with The Dow Chemical Company in the manufacture and sale of chlorinated benzenes, to the inestimable and irreparable damage to the business of The Dow Chemical Company.

Further Affiant says naught.

/s/ LEROY L. MASTIC, JR.

[Jurat Not Printed]

AFFIDAVIT OF ROBERT R. BUMB (DOW)
ATTACHED TO COMPLAINT FILED 3/15/78

DIST. CT. DKT. 5

ROBERT R. BUMB, being duly sworn, deposes and states:

THAT he received a Bachelor of Science degree in Chemistry from Texas Agricultural & Industry University, a Doctor of Philosophy degree in Physical Chemistry from Arizona State University in 1967 and is a member of the American Institute of Physics, the American Chemical Society and the American Crystallography Association;

THAT he has since 1967 been employed by The Dow Chemical Company in various areas involving technology of polymers, including the position of Technical Director for Designed Polymer Research;

THAT he is presently employed by The Dow Chemical Company as Production Manager of the Styrene Plastics Department, Michigan Division, Midland, Michigan, and is responsible for The Dow Chemical Company's manufacturing technology for more than thirty (30) sites world-wide which produce styrene plastics;

THAT he is familiar with The Dow Chemical Company's Michigan Division Midland plant complex located at Midland, Michigan, particularly with production facilities for styrene-acrylonitrile (SAN) resin and acrylonitrile-butadiene-styrene (ABS) resin and with a developmental production facility for styrene based heat resistant plastic (HRP), all located at said Midland plant complex, and the technology and processes incorporated in said facilities;

THAT The Dow Chemical Company became the first commercial producer of styrene resins in the United States forty (40) years ago and has continued to develop

and improve technology for the production of styrene resins ever since;

THAT the aforesaid SAN and ABS resin facilities incorporate styrene resin processing technology developed, at great expense to The Dow Chemical Company, over the past twenty-five (25) years and that expenditures over the past ten (10) years for research and development of styrene resin product and processing technology, some of which recent vintage technology is incorporated in the aforesaid three (3) production facilities, are in excess of fifty million dollars ($50,000,000);

THAT Affiant is informed that on or about February 7, 1978, aerial photographs of said Michigan Division Midland plant, including the aforesaid three (3) production facilities, were taken without authorization of The Dow Chemical Company by employees of Abrams Aerial Survey Corporation and which photographs are capable of enlargement and printing to show the area photographed on a scale of one (1) inch to twenty (20) feet;

THAT to the best of Affiant's knowledge, other than said February 7, 1978, episode of aerial photography the only other instances in which the Michigan Division Midland plant or portions thereof have been photographed from the air have been instances where The Dow Chemical Company has authorized such photography for its own use or benefit and on that basis Affiant, prior to February 7, 1978, had no reason to believe that unauthorized aerial photographs of said Midland plant or the three (3) aforesaid production facilities would be taken;

THAT based on the belief that no unauthorized aerial photographs would be taken of the aforesaid three (3) production facilities, said three (3) production facilities have, primarily for reasons of safety, been constructed

in a manner which reveals various reactor equipment, loading and storage facilities, transfer lines, motors and like equipment to view from an aerial perspective since same have not been enclosed within building structures;

THAT because of the location of said three (3) production facilities well behind an eight (8) foot chain link fence surrounding the perimeter of the Michigan Division Midland plant, among and behind various other production facilities and buildings, the details of said three (3) production facilities which would be visible from an aerial perspective are not visible from outside said perimeter fence;

THAT at the Michigan Division plant, The Dow Chemical Company exercises numerous general security measures such as restricting physical access thereto to authorized personnel only;

THAT the processes and technology employed in said three (3) production facilities has not been offered for sale or licensing to any business enterprise outside of corporations which are members of The Dow Chemical Company's corporate family and in which The Dow Chemical Company is at least an equal partner;

THAT within The Dow Chemical Company, all internal written reports, engineering plans, blueprints, diagrams and operating manuals pertaining to the technology and processes incorporated in said three (3) production facilities are tightly controlled and restricted to employees of The Dow Chemical Company who have need of access to same in the performance of their employment;

THAT with respect to said three (3) production facilities which are under Affiant's supervision, employees having access to same are required, upon hiring, to execute an agreement to maintain in confidence all trade secret or confidential technical or business infor-

mation of The Dow Chemical Company to which they have access and upon termination of employment are "debriefed" and reminded of their obligation with respect to specific technology to which they have had access;

THAT technical visitors other than employees or contractors of The Dow Chemical Company are not routinely permitted access to said three (3) production facilities and in instances when such access is granted, it is upon Affiant's authorization and issuance of a visitor pass to such an individual who is then accompanied by an employee of The Dow Chemical Company;

THAT such a technical visitor is not exposed to any equipment or technology contained in said three (3) production facilities unless Affiant first determines that such exposure is required for business purposes of The Dow Chemical Company and that the visitor agrees to maintain in confidence any information pertaining to the facility which he may obtain by virtue of his visit;

THAT no photographs of said three (3) production facilities are permitted from within the Midland plant without Affiant's authorization and then only for the use or benefit of The Dow Chemical Company;

THAT based on Affiant's familiarity with engineering diagrams, plans and blueprints which are ordinarily drawn to scale, aerial photographs enlarged to the scale of one (1) inch to about one hundred (100) feet would reveal the configuration of equipment, height and width of storage tanks and reaction vessels, approximate diameter of pipes, sequence of reactor connections (if any), points of feed, control instrument locations and capacity of loading and storage facilities;

THAT from aerial photographs enlarged to the scale of one (1) inch to about fifty (50) feet or less the size of motors and drives, types of control instrument employed,

position and type of agitation used in reactors, and like detailed information concerning process equipment would be revealed;

THAT given such information revealed by a one (1) inch to fifty (50) feet scale aerial photograph, a competent chemical engineer, using basic engineering calculations, could determine with reasonable accuracy the type of styrene resin process being employed, the solids levels and viscosity levels of the materials being handled, the overall through-put rate and manufacturing costs which information would be particularly valuable to a competitor of The Dow Chemical Company, relative to its own position and would enable such a competitor to obtain a competitive advantage with respect to pricing of competing products in such a competitor's product line;

THAT to the best of Affiant's knowledge, no accurate publication of information regarding said three (3) production facilities in the precision and detail revealed by aerial photographs of the scale one (1) inch to about one hundred (100) feet or less has occurred to date;

THAT Affiant believes that the processes and technology incorporated in said three (3) production facilities could not be reproduced by competitors technically skilled in the styrene resin art without such aerial photographs and without considerable expense and effort, at least as great as that expended by The Dow Chemical Company to develop same;

THAT because of possession by The Dow Chemical Company of information regarding the processes and technology incorporated in said three (3) production facilities, styrene resins produced thereby enjoy a cost advantage, superior product consistency and superior processability over styrene resins of like nature produced by its competitors;

THAT possession of aerial photographs of said three (3) production facilities by a competitor of The Dow Chemical Company, on the scale of one (1) inch to about one hundred (100) feet would likely cause The Dow Chemical Company to lose substantial business of inestimable amount due to a pricing advantage which would be gained by such a competitor;

THAT possession of aerial photographs of said three (3) production facilities by a competitor of The Dow Chemical Company, on the scale of one (1) inch to fifty (50) feet or less would certainly cause The Dow Chemical Company to lose substantial business of inestimable amount due to a pricing advantage which would be gained by such a competitor and would likely cause such a competitor to avoid incurrence of substantial research and engineering costs in the construction of production facilities of like nature since such photographs could essentially serve as an engineering diagram for construction of a large portion of production facilities of like nature and thereby confer a cost advantage on such a competitor over a party such as The Dow Chemical Company, inestimable in value, which has incurred such research and engineering costs, all to the irreparable harm of The Dow Chemical Company.

Further Affiant says naught.

/s/ ROBERT B. BUMB

[*Jurat Not Printed*]

LEROY L. MASTIC, JR. (DOW)
DEPOSITION EXCERPT 5/9/78

DIST. CT. DKT. 17

* * *

[11] * * * Q. Now, the technology that you've described to us with respect to the configuration of the processing, placement and construction of the heat transfer elements, the location of instrumentation, sir, is this technology particular to Dow or is it common knowledge in the Chlorobenzene industry?

A. The technology and design and construction of this plant is proprietary to Dow. It's unique with us.

Q. Mr. Mastic, are you aware as to whether or not Dow took any security measures during the design and construction of the plant?

A. Yes, we did.

Q. And can you tell me, please, what security measures, if any, Dow undertook during the design of the chlorobenzene plant?

A. Well, the research, design and engineering was all handled by Dow people.

Q. Do I understand by that, sir, that there were no outside contractors called in on the design stages?

A. During the construction phase we had outside contractors at various times in construction.

Q. Let me go on to that. What security measures, if any, did Dow undertake during the construction of the plant as opposed [12] to the design phases?

A. We did several things. There is the normal secrecy agreements with the contractors. In addition, all contractors, except the general mechanical contractor, only worked and was located in his specific area of the plant. The drawings they worked from were construction type drawings, they were not process drawings. In

other words, they did not contain the raw materials being used or the process conditions, temperatures, the pressures. They were primarily just construction drawings.

Q. And what would a construction drawing show to a contractor as opposed to the process drawings?

A. It would show him the elevation, installation of equipment, location of pipelines, foundation details, things that are specifically required for construction.

Q. Would such drawings enable him to duplicate the technology in connection with the plant; in other words, absent the process information?

A. Not directly.

Q. Now, you are if I understand right presently in charge of the overall operation of the chlorobenzene plant and can you gell me what security measures, if any, are currently maintained during the operation of the chlorobenzene plant?

A. Yes. The plant today is located well within the boundary of the Michigan Division. Of course that boundary is fenced and under normal security measures. This plant is not visible from [13] the fence at any point. In addition, this plant is a restricted area. We have signs posted about the perimeter of this plant saying this is a restricted area. Any visitors or anyone coming into this area must report to the office, check in with supervision in the area.

Q. Do you undertake any security measures in the chlorobenzene plant to prevent photography?

A. Yes, there are no cameras allowed. The only photographs of this plant were taken by Dow photographers and they are Dow photographs and used internally for our own purposes.

Q. Do your security measures apply to visitors as well as to Dow?

A. Yes. Visitors must check in at the area and if they are in the plant area they are escorted by members of the plant staff.

* * *

[14] * * * Q. Now, you've indicated the prohibition against cameras in the plant, I believe. What, based on your awareness of the various security measures that were in force during the design, construction of the plant and currently are in force during its operation, what security measures can you provide that would protect the technology from photography from overhead?

A. Well, of course we have our current security measures which I feel are appropriate. To completely protect this plant you'd have to go to some different type of construction. This is an outdoor plant. It was designed that way for a number of reasons. [15] The only way to completely protect this plant from surveillance, say overhead surveillance, would be to put a roof over the plant.

Q. In your opinion, sir, would it be feasible to do that?

A. Not at all.

Q. Could you tell me why not?

A. Well, there would be several reasons. One, the cost. This is a very large plant. The cost of a roof over a structure like this would be enormous and just not practical.

There are other reasons you wouldn't want to do this. There are safety reasons with respect to the safety of the personnel and the equipment. Say for instance you had an inadvertent exposure of raw material. Now, in this plant we use — the basic raw material is chlorine and benzene and if there were say an inadvertent release of these materials for some reason, if this plant were roofed you could have an accumulation or a concentration of the vapors or fumes of these materials presenting

an explosive or hazardous situation to the people and the equipment which would be intolerable. If a plant were roofed you could have this condition so for this reason we have left the plant open.

Q. Mr. Mastic, did you have occasion to view certain overhead photographs of Dow's chlorobenzene plant?

A. Yes.

Q. Do you recall approximately when you had opportunity to look [16] at those pictures?

A. This was several weeks ago.

Q. Now, do you have an opinion as to the benefit to a competitor of Dow's in the chlorobenzene business of access to or possession of such photographs?

A. Yes, I have an opinion.

Q. And would you state that opinion?

A. That opinion, it would be of immeasurable value to one of our competitors.

Q. Based on some of the instances that you have already stated, sir?

A. Yes. As I mentioned before our process is proprietary, it's constructed outdoors. The configuration, the location of the equipment, the process would be of great benefit to competitors. That's one reason.

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H. V. (JACK) WAIT, JR. (DOW)
DEPOSITION EXCERPTS 5/10/78

DIST. CT. DKT. 19

* * *

[11] * * * Q. Let me ask you first, sir, if you are familiar with the security measures that are taken by Dow in the design stages of chloralkali plants?

A. I am.

Q. And can you tell us, please, from your own knowledge what those security measures are?

A. Well, the list is extremely long but some of the more significant measures are that we design a plant using a thing that we [12] call a process flow sheet that's designed in a code that someone not familiar with the code would be unable to interpret what the drawing was telling him.

Q. Who has access to the code breakdown?

A. Only the people with an absolute need to know. Primarily the designers and the people who will later be involved in the plant layout.

Q. How about after design of the construction stages, can you tell us, please, what steps are taken by Dow for security during the construction of a chloralkali plant?

A. Well, primarily any contractors involved have to sign a secrecy agreement and they have to be in good standing, in other words, they have to be a contractor that we have not had some previous problem with. Further than that, the construction site is always fenced, there's always a 24-hour-a-day patrol maintained with the security system and this is to prevent anyone from just perusing the site.

Q. Are cameras allowed on the sites?

A. Absolutely not.

Q. How about after the start-up of the plant, can you tell us what if any security measures are maintained by Dow when the plant is running?

A. All visitors have to sign secrecy agreements. We do not allow cameras into any operating plant. Outsiders are not allowed to interview plant personnel. These would name a few [13] but the list is extremely extensive.

For example, our technical people are required to sign secrecy agreements. Knowledge is disseminated on a need-to-know basis. In other words, we do not make it a point to have each employee completely educated in the whole process. He becomes familiar with those areas that he has a need to know.

Q. Now, are you aware, sir, of any measures that could be taken to prevent aerial photography of the chloralkali plant in Midland?

A. As it stands today I'm not aware.

Q. Can you envisage anything that could be done to prevent aerial photography of the facilities?

A. I suppose it would be possible to build a roof over such a plant.

Q. How large is the plant?

A. It covers 30 acres.

Q. From your standpoint as an engineer would that be a practical alternative?

A. Absolutely not practical.

Q. Have you any idea what the cost would be to roof the chloralkali plant in Midland?

A. It would be extremely difficult to estimate the cost but I would think that you could not do it for less than $15,000,000.

Q. Would there be anything required other than a — other than the [14] erection of a roof over the facilities?

A. Well, the roof alone would introduce a lot of problems. There would be a lot of side effects from such a thing. But the roof alone would probably tend to hide the biggest part of the operation.

Q. To maintain the operation of the chloralkali facility would you have to expend any sums of money for items other than the roof itself?

A. Yes, the maintenance would become far more difficult. For example, today we use giant mobile cranes to move equipment from one place to another during

routine maintenance. These cranes, some of them are as high as 100 or 125 feet. Obviously a roof would not be practical that high so large bridge cranes would have to be installed permanently within the roof which would be extremely expensive. The capacities of some of these things would run into the range of a hundred thousand pounds lift capability so it would be an extremely difficult arrangement.

* * *

[20] * * * Q. From a position off the Dow property here in Midland is the chloralkali facility able to be seen from anyplace in the vicinity?

A. Yes, it is.

Q. Can any information be obtained from someone looking in from the outside?

A. Yes, I'd say it could.

Q. Would any of this information be what you would consider to be of a propretary [*sic*] nature or trade secret nature?

A. Probably not any really significant information but certainly some information.

Q. Is there any further measures taken to prevent people from seeing the chloralkali facility from off the premises?

A. Yes. The plant layout is designed in such a way that the more sensitive areas are not visible.

Q. Specifically what is done to prevent people from seeing?

A. Well, normally we will locate large tanks or other vessels that are nondescript in configuration, we'll locate them between the sensitive area and the public access.

Q. Are there any fences or berms or anything here that would prevent a person from seeing in from the outside?

A. We have a fence line completely around the periphery of the plant and also a berm.

Q. Where is the berm located?

A. It's located inside the fence line.

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LEROY L. MASTIC, JR. (DOW)
DEPOSITION EXCERPT 3/24/81

DIST. CT. DKT. 130

* * *

[51] * * * Q. Do airplanes fly over the chlorobenzene plant with any degree of frequency?

A. I have used commercial flights many times and out of Midland, I am assuming this is the type of thing you are talking about, yes, commercial flights pass over this location.

Q. How about private flights?

A. Oh, I would imagine private planes fly over it.

Q. At the time that you were building or involved in the construction of the chlorobenzene plant, did it enter into your consideration that someone would be able to fly over and photograph matters that you consider to be proprietary technology and that the plant would be vulnerable to this because of a lack of a roof?

A. That type of thing, of course, is possible. Again, the fact that that thing actually — that type of flight actually occurred and those type of photographs were taken I consider that very unusual and rather unique, you don't expect this.

Q. You don't expect photographs of the plant to be taken from the air?

A. Not of the type that are of concern here today.

Q. When you say of the type of concern, what do you have [52] reference to, the circumstances under which it occurred or the level of detail?

A. The fact that it was an unauthorized flight and that circumstance generated some photographs of such detail that I'm very concerned about them.

Q. So it was the fact that the flights were unauthorized — I'm just trying to understand. Is it the fact that the overflight was unauthorized that was the factor that surprised you?

A. Planes can fly over here every day and they do, and if they don't take photographs, I'm not concerned with those flights. What I am concerned about is a flight that comes over here at a low altitude and takes specific photographs such as we are concerned about here today.

Q. But did the possibility ever enter into your considerations and I have reference to an incident similar to the one that is the subject matter of this lawsuit; did that possibility ever enter into your consideration at the time that the chlorobenzene plant was under construction?

A. Matters such as this I think are always under consideration when you are talking about security of your location. And for instance, the way this particular flight occurred, I believe our plant protection people who are skilled in security matters detected the flight. To what concern this type of thing was during our construction, we know [53] when we build an outdoor plant this type of thing can always occur, it's not impossible, but it's quite improbable. This is why we were surprised that it occurred.

Q. You are surprised by the fact that it was unauthorized?

A. Yes.

Q. But you are not surprised by the fact that aerial photographs — that it is possible to take aerial photographs, authorized or unauthorized, of the plant?

A. That's a fact, they can be taken.

Q. And that possibility didn't enter into your consideration in the way you designed the plant?

A. Whenever you construct a plant that's of a nature that it can be photographed, of course you realize this, you know this. But there are usually other overriding reasons that you construct a plant in such a manner as we constructed this one.

Q. Do you take measures to maintain the possible exposure of proprietary technology when you construct the plant in the manner that you did to protect against the possibility of an unauthorized aerial photograph?

A. To a degree.

Q. Okay.

A. I think we do to the degree that it's prudent and reasonable and consistent with good construction practices and construction of safe facilities.

* * *

[88] * * * Q. Do you suggest that prior to that particular incident there was no clear policy concerning photographs taken by Dow employees from other divisions?

A. There has always been a clear policy concerning the photographs, films and tapes and cameras and how they are used. Policy procedures can always be updated and changed.

[89] Q. Do you know how old that policy concerning the use of films and tapes and video tapes and the like is, cameras?

A. It would go back many, many years. It was in force when I came here over 25 years ago.

Q. Are you aware of any other incidents in which there was some deviation from procedures regarding security?

A. Yes, the issue at hand today.

Q. But that, of course, isn't covered by anything that Dow has any control over.

A. It very clearly says that the Major Manager is to approve those kinds of photographs that are taken of his process and technology and approve their release.

Q. So it is your —

A. I feel very strongly about this.

Q. So it is your position that any photographs taken by anyone of the Dow plant has to have your approval?

A. Yes.

Q. I'm sorry. Of the Dow chlorobenzene plant.

A. Absolutely.

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MICHAEL KELYMAN (DOW)
DEPOSITION EXCERPT 3/25/81

DIST. CT. DKT. 131

* * *

[78] * * * Q. Do you know whether your office, your present office, whether the plant security office for the Michigan Division or any other office has ever considered making a recommendation that steps be taken to protect a project of the Dow Chemical Company from loss of trade secrets or proprietary information by means of aerial photography?

MR. GLEESON: Now, just as a query to clarify your question, are you going so far as to say recommendations to institute litigation, is that included in your questioning?

MR. BERRY: Certainly.

MR. GLEESON: Okay.

A. Well, with that the litigation is obviously a measure, and that was instituted.

[79] Q. Any other steps, or excuse me, any other times where that has occurred?

A. Again I'll refer to the practices that we have with reporting of employees and going to the extent of investigating why we had a flyover and even going so far as to inspect the pictures that were taken and replace film for the individuals and so forth, so on.

* * *

[121] * * * Q. Does your staff, and when I refer to your staff, I'm referring to your present staff, and the staff which was [122] under you when you were manager of plant security for the Michigan Division attempt to identify the owner of each aircraft which is considered to be suspicious and flying over the Midland facility?

A. We will if they've been considered suspicious, we will attempt to.

Q. How do you determine the identity of those individuals?

A. We go back through the flight control towers. If there's two or three or four possibilities, you go through the flight control tower and the Barstow Airport to see whether or not they can — they are aware of who that aircraft might belong to and who was flying it. If we are unsuccessful in that particular vein, if we have the numbers we have a certain list of local aircraft that we have we retain numbers on, and then beyond that we will go either to Grand Rapids or to Oklahoma City through the FAA to run down numbers on aircraft. And we have even on one occasion gone to aircraft manufacturers to determine who, in fact, they sold the aircraft to when it's changed hands a couple of times.

It depends on how much interest we've got and what we are trying to find out.

Q. How do you identify the purpose of the aircrafts passing over the Dow facility?

A. About all we can do is try — that's the purpose in trying [123] to run the individual down, to get a statement from him as to why he was doing so forth, so on. And preferably, if you will note in the procedures there we say it's important to make phone calls as rapidly as possible so that if an aircraft does land at one of the local airports that we can get a handle on him very quickly and get somebody over there before they've got a chance to get rid of their passengers or equipment or something like that. We will make every attempt that we can – reasonable attempt to get that kind of information.

Q. And if you are told by the person you contact that they did not photograph the plant, what do you do?

A. If we generally — well, there's a couple of things you can do. Either you take them at face value or you, as you make your inspection, visiting with that particular individual, you would take note of how that plane might be equipped, whether or not you as an individual noticed any particular photographic equipment. You might converse with the pilot who took them up to substantiate that individual's claim as to whether he did or didn't take photographs.

Q. And if there's no special equipment and the pilot tells you no photographs were taken?

A. Probably we'd not pursue it any further than that.

* * *

[181] * * * [A.] . . . If the photographs were available and the negatives were available, he would have taken those and we would have developed them in a Dow laboratory, we would have screened the pictures and we would have reimbursed the individual for the film that we destroyed. That is our policy.

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H. V. (JACK) WAIT, JR. (DOW)
DEPOSITION EXCERPT 4/8/81

DIST. CT. DKT. 152

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[40] * * * [Q.] . . . Can you tell me how long you examined the photographs back in 1978 which were identified to you as the photographs that the EPA had taken?

A. No.

Q. Do you recall whether it was for more than an hour?

A. Yes.

Q. Was it for more than an hour?

A. Yes.

Q. Do you recall how much more than an hour it was?

A. No.

Q. Did you spend the time of your examination attempting to pick out details to which you referred here today concerning the plant layout?

A. Yes.

Q. And do you recall approximately how long it took you to do that?

A. No.

Q. Well, was it more than an hour?

A. I picked out some details instantly.

Q. Was that based upon the fact that you're familiar with the plant?

A. Some of it, yes.

* * *

[43] * * * Q. Let's talk about a person who has experience in a plant similar to the Dow plant which produces similar products, let's say a man of your experience, comparable to yours but doesn't have the precise knowledge of the Dow plant that you have, but has knowledge of a similar plant.

A. I do not believe he could gain useful proprietary information.

Q. From a view from the outside?

A. That's correct.

Q. And when you say useful proprietary information, what do you mean?

A. Information that he would understand what it was when he [44] looked.

Q. And why would he not be able to gain that information?

A. He would not know what he saw.

Q. Would that also be true if he viewed the same piece of equipment or technology from the air?

A. It would not be true in the same sense.

Q. Well, can you give me the distinction or the benefit of the distinction that you're drawing?

A. The view that he would have from the ground outside the fence is the view that we have chosen to show him.

The view from the air is almost equivalent of a process drawing that would show the relationship of other equipment, from which he could decide and figure out what he wished to know.

Q. What if he flew over in an airplane, would he be able to make that same determination?

A. Not the same as from a photograph.

Q. But would he be able to pick up some of the information to which you referred to?

A. Possibly.

Q. Would he be able to increase his knowledge with more flights over the plant?

A. I would say yes.

Q. Do you believe that he could ever come to the point where he could gain as much knowledge of Dow's proprietary [45] technology from repeated flights over

the plant as he would gain from a view of the photographs here?

A. No.

Q. Would he gain information that you would consider to be of substantial benefit to him, nonetheless?

A. How many flights?

Q. Well, why don't we turn that question around and ask you how many flights over the plant do you think it would take for this hypothetical person that we're referring to to gain what you might consider information of substantial benefit to competitors?

MR. GLEESON: If you're allowing yourself to consider other factors and judge the frequency of flights, you should include that in your answer such as to altitude.

A. I guess from my standpoint, I don't exactly understand what he means by how many flights.

Q. (Mr. Allen, continuing): You indicated that you wanted to know how many flights the person would take.

A. That would be my first question.

Q. I'm asking you how many flights do you believe, that is, how many aerial passes in an aircraft of one sort or another would it take for a person, the hypothetical person to which we referred to here today, to gain information concerning the chloralkali facility which [46] you would deem to be of significant benefit?

A. At what altitude?

Q. Well, you can identify that altitude for me as well.

A. At a low level flight some information could be gained on the first flight.

Q. When you say low level, what level are you referring to?

A. 500 to 1000 feet.

Q. 500 to a thousand feet. What about at a level of 5000 feet?

A. With an unaided eye?
Q. With an unaided eye.
A. No useful information.
Q. No useful information.
What about an overall flight at 3000 feet?
A. Unaided eye?
Q. Unaided eye.
A. No useful information.
Q. How about a flight at 2000 feet?
A. Possibly some useful information.
Q. Some useful information?
A. Possibly.

* * *

[50] * * * Q. Can you tell me at what altitude it would take a person with the experience which we have hypothesized today to gain what you would consider significant information of the chloralkali facility with an unaided eye?

A. I think there would be many altitudes that this can be done.

Q. Can you specify those altitudes?

A. The lower, the better.

Q. The lower, the better?

A. The higher, the less information you would gain, but there is no cutoff.

Q. Well, could you give me an indication of the altitude at which the height is sufficient that you would no longer gain significant information?

[51] * * * A. My general opinion is at somewhere around a half a mile altitude I would no longer be concerned with what someone could see with an unaided eye. Less than that, I would become increasingly concerned more than I would become disinterested.

* * *

LETTER DATED 6/21/79
FROM UNION CARBIDE CORPORATION TO EPA,
REGARDING AERIAL SURVEILLANCE PER EPA's SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 4/17/81

DIST. CT. DKT. 134

UNION CARBIDE CORPORATION
270 PARK AVENUE NEW YORK, NEW YORK 10017 (212) 551-2491
ROBERT L. DOAN ASSISTANT GENERAL COUNSEL

George A. Shanahan, Esq. June 21, 1979
Attorney, Water Enforcement Branch
Enforcement Division, Region II
United States Environmental Protection Agency
26 Federal Plaza
New York, New York 10007

Re: Proposed EPA Overflights of Erie and Niagara Counties, New York, June 25-29, 1979

Dear Mr. Shanahan:

This is in response to your letter of June 14 to Mrs. Mary G. Manetti of our Law Department, in which you advised us that EPA proposed to conduct photographic flights over Erie and Niagara Counties, New York, during the week of June 25 and asked us to contact you if we had any objection to these overflights. To the extent that you contemplate photographing any Union Carbide Corporation facility, we vigorously protest and object to this aerial intrusion. The statutes that you cite do not contemplate this type of access to our facilities. The overflights, if conducted without a search warrant, will violate the rights of Union Carbide against unlawful search and seizure under the Fourth Amendment to the U.S. Constitution and, with or without a search warrant, may constitute an unlawful taking of Union Carbide proprietary information in violation of the Fifth Amendment to the U.S. Constitution.

Your letter does not indicate what types of surveillance techniques are contemplated, but we do have to assume that the overflights may be using the full range of aerial photography, multi-spectral scanning and laser scanning techniques that have been developed to date by the EPA's Environmental Monitoring & Support Laboratory as well as the other governmental agencies known to be [*pg.* 2] involved in aerial surveillance. Therefore, we must assume that there is substantial risk of loss of proprietary information unless and until we have had an opportunity to review a set of all photographs taken of any Union Carbide facility during next week's overflights and by this letter I request that a full set of prints of all such photographs be mailed to my attention as soon as prints are available, so that we may determine what additional steps must be taken in order to protect our proprietary interests. We also reserve the right to request access to the negatives in order to make our own prints in the event we experience difficulty in enlarging the prints you provide to us.

I am familiar with the April 11, 1979 letter sent to all EPA Regional Administrators by Marvin B. Durning, the Assistant Administrator for Enforcement, establishing new procedural guidelines to be followed by EPA in the light of the Supreme Court's decision in *Marshall* v. *Barlow, Inc.*, 46 LW 4483 (1978). Nowhere is the subject of overflights discussed. We seriously question whether the EPA is desirous of setting forth all the detail of the surveillance techniques now being used by EPA in any warrant application to the extent contemplated by Mr. Durning's letter or whether, once such details are set forth, any Federal Judge or Magistrate would sign any warrant authorizing the utilization of those techniques.

We are aware that the EPA has previously made aerial photographs of Union Carbide facilities as part of a

broad surveillance of the Kanawha Valley, West Virginia. On March 5, R. L. Foster of our South Charleston, West Virginia office, requested a set of those photographs under the Freedom of Information Act. We have been advised that the photographs were finally mailed on June 20 by the EPA's National Enforcement Investigations Center in Denver. When we have had an opportunity to analyze these photographs, we contemplate requesting under FOIA a full and complete list of all Union Carbide facilities which have been subjected to aerial surveillance by (or at the direction of) EPA, seeking access to those photographs and demanding the return of all photographs (negatives as well as prints) that contained proprietary Union Carbide information and for the retention of which EPA could not establish any continuing need based on ongoing investigations. Those photographs (if any) that fell into the latter category, we would seek to subject to appropriate protective orders.

[*pg. 3*] It is disturbing to find that the EPA's file of proprietary information taken from Union Carbide without our consent is continuing to grow even as we try to get a fix on its present contents and the extent of our loss to date. I strongly urge that EPA call an immediate halt to all overflights of commercial facilities throughout the United States (and not just the overflights contemplated for next week in Erie and Niagara Counties) until reasonable ground rules can be developed for limiting the amount of proprietary information collected by EPA to the absolute minimum and providing adequate protection for that irreducible minimum. I believe that this is a matter in which EPA's General Counsel needs to be involved and would appreciate your bringing this letter to her attention through your Region Office as promptly as possible.

Very truly yours,

RLD:jw /s/ Robert L. Doan

LETTER DATED 6/22/79 FROM FMC CORPORATION TO EPA, REGARDING AERIAL SURVEILLANCE PER EPA'S SUPPLEMENTAL ANSWERS TO INTERROGATORIES FILED 4/17/81

DIST. CT. DKT. 134

FMC CORPORATION
2000 MARKET STREET PHILADELPHIA, PENNSYLVANIA 19103 (215) 299-6000

CERTIFIED MAIL *RETURN RECEIPT REQUESTED*

George A. Shanahan, Esq. June 22, 1979
Attorney, Water Enforcement Branch, Enforcement Division
United States Environmental Protection Agency, Region II
26 Federal Plaza
New York, New York 10007

Re: Proposed Aerial Surveillance and Photographing by EPA Region II along the Niagara River — Week of June 25-29, 1979

Dear Mr. Shanahan:

Your letter dated June 14, 1979, advising me of the above-referenced surveillance and photographing, was received by me on June 18, 1979. To the extent that such surveillance and photographing involves FMC facilities and sites, we do object and expressly do *not* waive any rights in this regard.

In my opinion, the standard inspection/right of entry provisions from the various water, air, hazardous waste, and toxic substances statutes cited in your letter do not authorize the proposed surveillance and photographing. As you are aware, the United States Supreme Court recently addressed a similar issue in *Marshall* v. *Barlow's Inc.*, 436 U.S. 307 (1978), and determined that the inspection provision (similar to those in the water, air, hazardous waste, and toxic substances statutes) in the Occupational Safety and Health Act does not override constitutional requirements and is unconstitutional to the extent it is construed to authorize a warrantless search or inspection. Also, as you

may be aware, in a situation even more proximate to that which EPA Region II proposes, in that it also involved aerial surveillance and photographing, the Dow Chemical [*pg.* 2] Company has brought suit (*Dow Chemical Co.* v. *Costle*, Civil Action No. 78-10044, U.S. D.Ct., E.D. Mich.) against EPA over such aerial surveillance and photographing, alleging *inter alia* violation of constitutional rights guaranteed by the Fourth and Fifth Amendments. Dow has obtained a temporary restraining order and preliminary injunction in this proceeding.

In any event, assuming the aerial surveillance and photographing occur, as stated in your June 14, 1979 letter, in possible contravention of FMC's constitutional and other rights, the photographs taken as a result may well contain business confidential information which, if published, or released to a competitor, could be detrimental to FMC's interest and position in the market. If such photographs are taken, we request that to the extent that they pertain to FMC facilities and sites they be maintained as business confidential information under the provisions of 40 C.F.R. Part 2, and that FMC be immediately furnished with copies of such photographs. We further request that any report or other document which includes such photographs or otherwise records the results of or observations made during the proposed aerial surveillance relative to FMC facilities and sites be maintained as business confidential information, and that copies of such reports or other documents be immediately furnished to FMC.

Yours very truly,

/s/ David C. Landgraf, Counsel

cc: Eckhardt C. Beck, Regional Administrator, EPA Region II; Director of Enforcement, EPA Region II; Peter Devine, Esquire, Regional Counsel, EPA Region II; Joan Bernstein, Esquire, General Counsel, EPA Washington; Marvin Durning, Esquire, Assistant Administrator for Enforcement, EPA Washington.

WIRE DATED 1/11/80 FROM EPA TO MONSANTO, REGARDING AERIAL PHOTOGRAPHY ATTACHED TO DOW's MOTION TO COMPEL DISCOVERY FILED 3/26/81

DIST. CT. DKT. 117

— *WESTERN UNION MAILGRAM* —

US ENVIRONMENTAL PROTECTION AGENCY
324 EAST 11 ST
KANSAS CITY, MO 64106

4-061476S011003 01/11/80 ICS IPMBNGZ CSP STLB
2 8163746534 MGM TDBN KANSAS CITY MO 01-11 0510P EST

▶ MONSANTO QUEENY WORKS
ATTN PLANT MANAGER OR RESPONSIBLE PARTY
1700 SOUTH SECOND ST
ST LOUIS MO 63177

THIS IS A CONFIRMATION COPY OF A PREVIOUSLY PHONE-DELIVERED TELEGRAM

EPA REGION 7 WILL BE CONDUCTING AN AERIAL SURVEY OF THE METROPOLITAN ST LOUIS AREA THE WEEK OF JANUARY 14. AERIAL PHOTOS OF YOUR FACILITY WILL BE TAKEN AS PART OF THIS SURVEY. PLEASE DIRECT QUESTIONS TO KENNETH SCOTT RITCHEY AT 816-374-6534.
ROBERT MORBY 324 EAST 11 ST KANSAS CITY MO 64106

17:11 EST

MGMCOMP MGM

WIRE DATED 1/14/80 FROM MONSANTO TO EPA, REGARDING AERIAL PHOTOGRAPHY ATTACHED TO DOW's MOTION TO COMPEL DISCOVERY FILED 3/26/81

DIST. CT. DKT. 117

— *MONSANTO OUTGOING MESSAGE* —
Tele-Communications System

INDICATE DESIRED SERVICE: ☒ DOMESTIC – FULL RATE
ALL MESSAGES MUST BE TYPED OR PRINTED IN BLOCK LETTERS

DATE: 1/14/80 *TIME:* 4:10 p.m.
SENDER'S ACCOUNT NO.: 1-00-741.04
TWX/TELEX NO.: 816-374-2605

MR. ROBERT MORLEY
ENVIRONMENTAL PROTECTION AGENCY *R-U-S-H*
REGION VII
324 E. 11th STREET *BOOK MESSAGE*
KANSAS CITY, MISSOURI 64106

WE HAVE BEEN INFORMED THAT THE EPA IS TENTATIVELY PLANNING TO TAKE AERIAL PHOTOGRAPHS OF THE METROPOLITAN ST. LOUIS AREA DURING THE LATTER PART OF THE WEEK OF JANUARY 14, 1980. MONSANTO HEREBY OBJECTS TO SUCH AERIAL PHOTOGRAPH OF MONSANTO FACILITIES. PRIMARY REASON FOR OBJECTION IS TO PROTECT VALUABLE PROPRIETARY INFORMATION, WHICH WOULD BE DISCLOSED BY SUCH AERIAL PHOTOGRAPHY. IN ADDITION, SUCH AERIAL PHOTOGRAPHY WOULD VIOLATE THE PROHIBITION AGAINST UNREASONABLE SEARCHES AND SEIZURES IN THE FOURTH AMENDMENT TO THE U.S. CONSTITUTION.

PHOCION S. PARK
ENVIRONMENTAL COUNSEL
MONSANTO COMPANY

CC: KENNETH SCOTT RITCHEY, EPA, REGION VII,
324 E. 11th Street, KANSAS CITY, MISSOURI 64106

for BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

IN-IR Rev. 1/74

WIRE DATED 1/17/80 FROM EPA TO MONSANTO, REGARDING AERIAL PHOTOGRAPHY ATTACHED TO DOW's MOTION TO COMPEL DISCOVERY FILED 3/26/81

DIST. CT. DKT. 117

— *WESTERN UNION MAILGRAM* —

USEPA REGION 7
324 EAST 11
KANSAS CITY, MO 64106

4-043194S017 01/17/80 ICS IPMBNGZ CSP STLB
8163746534 MGM TDBN KANSAS CITY MO 63 01-17 0333P EST

JAN 18 1980

▶ PHOEION [sic] S. PARK, ENVIRONMENTAL COUNCIL, [sic]
MONSANTO CO
800 NORTH LINDBERG BLVD
ST LOUIS MO 63166

THE US EPA REGION 7 HAS RECEIVED YOUR PHONE MESSAGE OF 1-15-80 AND WILL NOT OVERFLY YOUR FACILITIES THE WEEK OF JANUARY 14, 1980. YOU WILL BE NOTIFIED OF ANY DEVIATION FROM THIS DECISION. PLEASE DIRECT QUESTIONS TO MYSELF AT 8163746534.

ROBERT MORLEY
324 EAST 11
KANSAS CITY MO 64106

15:34 EST

MGMCOMP MGM

TRANSCRIPT EXCERPT OF 11/12/80 ORAL ARGUMENT ON CROSS MOTIONS FOR SUMMARY JUDGMENT (P. 44)

DIST. CT. DKT. 232

* * *

[Tr. 44] * * * All the Fourth Amendment cases involve a search for evidence. Of course, that's what the government was doing, we don't deny that. * * *

* * *

• • •

ORDER ALLOWING CERTIORARI

Supreme Court of the United States

(Filed June 10, 1985)

Dow Chemical Company, Petitioner, v. United States, etc.
No. 84-1259

The petition herein for a writ of certiorari to the *United States Court of Appeals for the Sixth Circuit* is granted.

The case is set for oral argument in tandem with No. 84-1513, *California* v. *Ciraolo*.

NON-FULLY OWNED SUBSIDIARIES AND AFFILIATES OF THE DOW CHEMICAL COMPANY AS OF JUNE 30, 1985

Subsidiaries and affiliates owned both directly and indirectly have been included. The company italicized is the direct owner of the companies listed below it. "Dow's" percent ownership is indicated by each company.

SUBSIDIARIES

The Dow Chemical Company

Alamo Land Company Inc. (56%)
Gruppo Lepetit S.p.A. (99%)
L.I.F.E. (Laboratorios Industriales Farmaceuticos Ecuatorianos) (59%)
Laboratorios L.I.F.E. del Salvador S.A. (59%)
Negocios e Industrias S.A. "Neisa" (59%)
Pacific Chemical Berhad (51%)
Pacific Cable Products Sendirian Berhad (51%)
Ivon Watkins-Dow Ltd (51%)
Société Industrielle de Plastic et de L'acier SA (99%)
The Cynara Company (90%)

Dow Chemical A.G.
(A.G. owned 100% by The Dow Chemical Company)

Petroquimica-Dow S.A. (70%)

AFFILIATES

The Dow Chemical Company

Dow Corning Corporation (50%)
Dowell Schlumberger Corporation (50%)
Dowell Schlumberger Incorporated (50%)

Compagnie des Services Dowell Schlumberger (50%)
El Dorado Terminals Company (50%)
Agro-Quimica Maringa (20%)
Bank Mendes Gans (29%)
Chemi-Trol Chemical Company (23%)
DOKI (49%)
Estireno Del Zulia C.A. (25%)
Ibachem Ltd (40%)
Oasis Pipeline Company (30%)
Package Machinery Company (29%)
Piramides Brazil (30%)
Total Raffinaderij Nederland N.V. (20%)
Zoo Agro de Venezuela C.A. (49%)
Al Miyah Chemicals (Ltd.) (49%)
Baratek (80%)
Boersele Hydrocracker B.V. (45%)
Insul/Crete Company, Inc. (50%)
Joliet Marine Terminal (50%)
Long Beach Marine Terminal (50%)
Metal Mark Inc. (50%)
Oronzio De Nora Impianti Elettrochimici SA (50%)
Sinor Corradini Navarra S.A. (90%)
Technovest Corp. (20%)

Dow Chemical A.G. (A.G. is
owned 100% by The Dow Chemical Company)

Polychem Ltd (25%)

Coral Navigation (Coral is
owned 100% by The Dow Chemical Company)

Chief Shipping Company (50%)

Dow Chemical Company Ltd
(Ltd is 100% owned by Dow Chemical A.G.)

Cromarty Petroleum Company Ltd (50%)

Dow Chemical of Canada Ltd (Canada Ltd is
100% owned by The Dow Chemical Company)

Schlumberger Canada Inc. (50%)
Fort Saskatchewan Ethylene Storage Limited (50%)
Lawrason's Chemical, Ltd (20%)
Wabiskaw Explorations Limited (50%)

Maligne Resources Limited (Maligne is
100% owned by Dow Chemical of Canada Ltd)

MT Partnership (50%)

Dow Chemical Africa (Pty) Limited (Africa is
100% owned by Dow Chemical A.G.)

J.V. Chemicals (50%)

Dow Chemical International Energy Company (Energy is
100% owned by The Dow Chemical Company)

Scotdril Offshore Co. (50%)

Dow Chemical S.p.A. (S.p.A. is
100% owned by Dow Chemical A.G.)

Corradini Poliuretani S.p.A. (50%)

Dow Chemical Iberica S.A. (Iberica is
100% owned by Dow Chemical A.G.)

Transformadora De Etileno (50%)

Dow Quimica S.A. (Quimica is
100% owned by The Dow Chemical Company)

Estireno del Zulia C.A. (25%)
Expansao Correctora De Seguros Ltda (33%)

Dofinco, Inc. (Dofinco is
100% owned by The Dow Chemical Company)

DCS Capital Partnership (50%)
DCS Capital Corporation (100%)

Dow Financial Services Corporation (Financial Services is
owned 100% by The Dow Chemical Company)

Dow Banking Corporation (78%)
Dow Scandia Holdings Limited (52%)
Dow MBF Limited (54%)
MBF Factors SDN. BHD. (26%)
MBF Leasing BHD. SDN. (29%)
MBF Leasing (S) Pte. Ltd. (49%)